

ALL HANDS

DECEMBER 1979

in this issue:

Liberty in Monte Carlo

R&B-Advancement System



Oct 1988

30



What it's all about—a Russian Mod Kildin-Class DDG near the anchored USS Caron (DD 970) in the Black Sea. The scene took place during a week-long "show-the-flag" voyage of Caron and USS Farragut (DDG 37) in that part of the world. (Photo by PHAN George F. Bruder.)

ALL HANDS

MAGAZINE OF THE U.S. NAVY — 57th YEAR OF PUBLICATION
DECEMBER 1979 NUMBER 755

Chief of Naval Operations: ADM Thomas B. Hayward
Chief of Information: RADM David M. Cooney
OIC Navy Internal Relations Act: CAPT Robert K. Lewis Jr.
Director, NIRA Print Media Div: LT Timothy J. Beecher

Features

6 ASBESTOS—THE INSULATION THAT LINGERS

Long Beach Naval Shipyard study involved 6,640 workers

12 LCU 1666—DENVER'S SHIP WITHIN

Life aboard an amphib ship's 340-ton landing craft

14 USS ALBANY'S FIVE DAYS IN MONTE CARLO

Sixth Fleet sailors get to watch Monaco's Grand Prix

22 GETTING A LOOK AT LEE

Dependents and guests take short cruise aboard USS *Robert E. Lee* (SSBN 601)

29 UCT-2 DEPLOYS TO THE TOP OF THE WORLD

Some arctic diving hazards just aren't covered by the regs

30 HEAD FOR THE PASS

New center at Pax River takes the red tape out of checking in

33 FORTRESS GALE—NAVAL POWER IN THE PACIFIC

Thousands participate in 7th Fleet's largest amphibious exercise

38 FOR THE NAVY BUFF

Another installment dealing with nautical trivia

42 ADVANCEMENT SYSTEM

No. 13 in a series on Rights and Benefits

Departments

2 Currents

17 Bearings

27 Grains of Salt

Covers

Front: Three 6th Fleet members serving aboard the guided missile cruiser USS *Albany* (CG 10) stop to talk with a policeman during their visit to Monaco. See page 14. Photo by PH1 John Lucas.

Back: Seventh Fleet ships in formation during Operation Fortress Gale. See page 33. Photo by PHC Ken George.

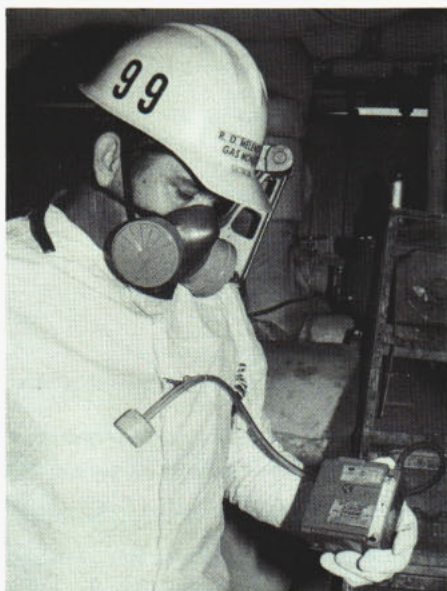
Staff: Editor: John F. Coleman; News Editor: Joanne E. Dumene
Associates: Richard Hosier (Layout), Michael Tuffli (Art),
Edward Jenkins (Research); Writers: PH1 Jim Preston,
JO2 Bob Rucker, JO2 Barbara Tein-Geddes, JO3 Steve Bellow

Production: LT Chris Zebrowski, LTJG Jim Mulvey,
DM1 Ed Markham, Elaine McNeil

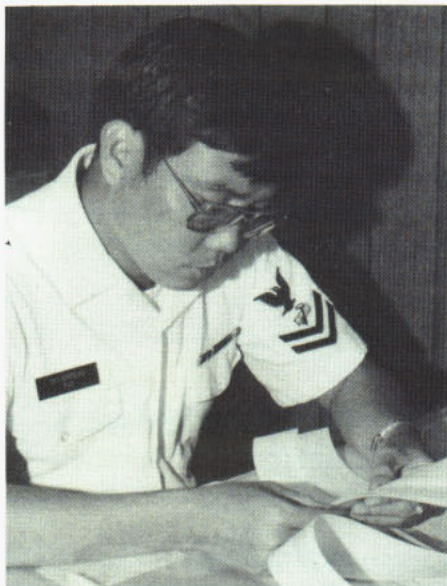
Send mail to: *All Hands*, Hoffman No. 2, 200 Stovall St., Alexandria, Va. 22332.

Phone: (202) 325-0495; AUTOVON 221-0495.

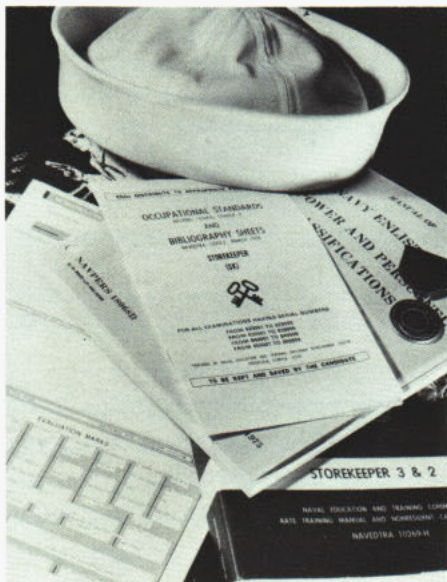
Message: NAVINRELACT WASHINGTON DC (PASS TO ALL HANDS)



Page 6



Page 30



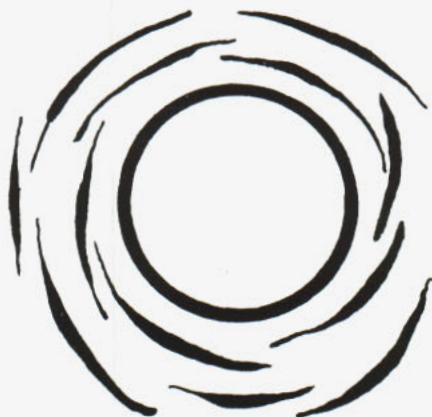
Page 42

Currents

CNO Addresses Naval Reserve Association

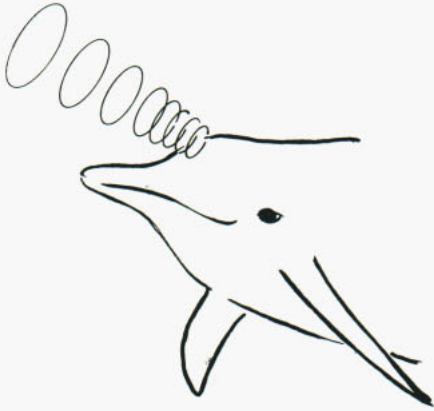
Chief of Naval Operations Admiral Thomas B. Hayward called 1979 "...A good year for the Naval Reservist," when he addressed the annual conference of the Naval Reserve Association in Buffalo, N.Y. CNO told his listeners he sensed a change in attitude among Americans for the Navy, a better feeling within the Navy toward itself, and described 1979 as a year in which many new ships have joined the fleet and new weapons systems have become operational. CNO evaluated the "One-Navy" concept and characterized it as excellent. He cited the size of the Naval Reserve, 87,000 selected reservists, as secure. ADM Hayward cited several readiness gains in the naval reserve this year. He was especially impressed with training achieved in simulators and training modules installed at many centers. CNO said his 1980 plans for the Naval Reserve include: maintaining the current momentum; improved readiness, with a C-2 readiness goal for every selected reserve unit; and keeping naval reservists fully involved in surface ship warfare.

Navy Throws Switch on Sun



A joint Department of Energy (DOE) and Navy effort is taking solar cells—known as photovoltaics—out of the laboratory and into the field. The program, which is deploying solar cells at 48 sites aboard Navy and Marine Corps installations throughout the world, seeks to promote growth of commercially usable solar cell systems for civilian and military use. Phase one of the program will see solar cells installed at: Marine Corps Base, Camp Pendleton, Calif.; Marine Corps Air Station, El Toro, Calif.; Naval Weapons Test Center, China Lake, Calif.; Naval Ordnance Station, Indian Head, Md.; Naval Station, Rota, Spain; Pacific Missile Test Range, Point Mugu, Calif.; and Naval Weapons Station, Charleston, S.C. Electricity, generated by the solar cells when the sun shines on them, will power radios, communications repeaters, navigation aids and obstruction lights at these locations. Phase two will see use of the solar cells expanded to provide power for small facilities like guard posts, camera stations, platforms at sea, and for personnel quarters in remote locations. These installations will be made at: Naval Weapons Center, Lualualei, Hawaii; Naval Support Facility, Diego Garcia; Naval Ocean Systems Center, Panama City, Fla.; and Naval Research Laboratory, Washington, D.C. DOE and Navy engineers plan future joint projects to provide power to larger facilities such as selected housing sites. Although these systems are small, and will not replace large amounts of conventionally generated power, they point the way for more extensive use of solar cells in the future.

Navy Wants to Know What Dolphins Hear



Dolphins are able to locate underwater objects at ranges up to several hundred yards, and are able to identify these objects. Their capabilities are far better than the best sonar systems scientists have been able to develop to date. Naval Ocean Systems Center researcher, Doug Martin, has an idea how they do this. Now he's trying to discover if humans can discriminate between echoes from different underwater objects, identifying them like dolphins do. Martin knows a lot about getting around by means of sound, because he has been blind since shortly after birth. "I use a crude form of sonar," he said. "When walking or moving, I tap my cane on the ground or floor. I know when I'm nearing a car or trees, for example, by the echoes I hear from the taps." Martin's research centers around recordings of dolphin sonar "clicks," similar to the pinging sounds from Navy sonar systems. He slows the recordings, transforming the echoes into tones in the human hearing range. Volunteers listen to these sounds and report the differences they perceive between various returning echoes. For example, they describe the differences they hear between echoes from rocks and metal. "The cues the human uses to discriminate between echoes from different sources should provide us with insight on how the dolphin uses its echo-location system," Martin explained. Volunteer responses will be correlated and statistically analyzed in an effort to learn how the information gained can be put to good use by the Navy. Martin has two goals for his research. He hopes information gained in his studies will enable the Navy to develop sonar systems equalling the dolphins. "And I keep thinking that perhaps my current work will somehow lead to a type of sonar system that will give the blind greater mobility," Martin added.

Enlisted Eval System Manual

The new Navy Enlisted Performance Evaluation System Manual (NAV-MILPERSCOMINST 1616.1 of Aug. 10, 1979) is out, and it modifies and tightens some procedures for grading enlisted performance. This is part of a series of improvements which eventually will include a new enlisted evaluation form. As of Sept. 1, the Naval Military Personnel Command (NMPC) started auditing all evaluation reports. Those not meeting criteria and standards outlined in the evaluation manual will be returned to issuing commands for corrective action. Some things auditors will look at are accuracy, correctness and proper comments procedures. The new instruction also requires continuity in all E-5 and above evaluations. This means a service member's record from E-5 and above must account for all service time on a day-for-day basis. Permission is also granted to submit these evals up to 60 days early or late under special circumstances. Separate justification of very high or very low marks is no longer required. Comments and justifications are now combined and will be reflected in the new enlisted evaluation form when it becomes available. Rights to redress for errors or injustices are also outlined in the new manual. The overall goal of this instruction is to ensure equitable and complete evaluation of every Navy enlisted member and to recognize the need for accurate and fair measures of performance.

Edward Hidalgo Confirmed as SECNAV

Edward Hidalgo was confirmed as the 64th Secretary of the Navy on Friday, Oct. 19. His nomination as civilian head of the Navy and Marine Corps was approved by the Senate Armed Services Committee on Oct. 18, and confirmed in a voice vote by the full Senate the next day. Mr. Hidalgo, who has served as assistant secretary of the Navy for manpower and reserve affairs and logistics since April 25, 1977, was sworn in as Secretary of the Navy in ceremonies at the Pentagon.

Career Oppor- tunities . . . Duty in Japan Offered



There are openings for senior aviation ratings (E-6 - E-9) in Carrier Airwing Five aboard USS *Midway* (CV 41) homeported in Yokosuka, Japan. Personnel with the following qualifications are being sought to volunteer for 36-month accompanied tours or 24-month unaccompanied tours:

AF—E-9 with F-4 experience

AV—E-9 with A-6, A-7 or E-2 experience

AMS/H—E-6-E-8 with F-4, A-6, A-7 or H-3 experience

AD—E-6-E-8 with F-4 or A-7 experience

AO—E-6-E-8 with F-4 or A-7 experience

AE—E-7-E-8 with F-4 or A-6 experience

Interested persons can get additional information by contacting Commander R. E. Smith (NMPC 404), AUTOVON 291-5835 or commercial 301-427-5835.

New Emphasis on GMT in "A" School Training

A new program gives added emphasis to general military training (GMT) in Navy "A" schools. GMT started playing a daily role in "A" school students' lives—much as it did in the 1960s—on Oct. 1. On that date the integrated training battalion (ITB) concept, a program combining side-by-side military training with professional and technical training, was started at Service Schools Commands, San Diego, Calif., and Great Lakes, Ill., and Naval Air Technical Training Command at Memphis, Tenn. The schools have returned to the practice of forming students into companies under leadership of a company commander and an assistant. These leaders manage the daily routine from reveille to the start of school hours, march the companies from classes to meals, and conduct daily physical training and close order drill. This program, approved by CNO earlier this year, has been instituted by Chief of Naval Education and Training to raise military and motivational aspects of training to a level equal with technical training, and helps ensure appropriate military and disciplinary standards at the commands.

Career Opportunities . . . Enlisted Flight Engineers Sought for P-3s

Approximately 800 billets exist for enlisted flight engineers in P-3 *Orion* long range patrol aircraft, and currently, some 175 are vacant. Qualified Navy people who want to wear the Navy aircrew wings designating them as aircrewmembers are being sought to enter training to fill these vital billets. Current needs are for E-5 through E-8 petty officers in the AD, AE and AM ratings. Basic qualifications for this training are: physical qualification to be an aircrewman; GCT/ARI of 105 or higher; ability to pass a first class swimming test; eligibility for at least a secret clearance and a consistent record as a high performer. Successful applicants will train in two schools. The first is the five-week Naval Air Crewman Candidate School (NACCS) in Pensacola, Fla. Upon successful completion of this school, they will go to 18 weeks of training in P-3 Flight Engineer School at NAS Jacksonville, Fla., or NAS Moffett Field, Calif. Successful trainees are designated as NEC-8251 aircrewmembers (P-3 flight engineer), and are eligible for flight pay. P-3 squadrons are homeported in Jacksonville, Fla., Moffett Field, Calif., Hawaii and Brunswick, Maine. These squadrons deploy to overseas locations throughout the world. Interested persons are urged to get more information by contacting: LT Lichwala or ADCS Robertson by message (NMPC 404E) or by calling AUTOVON 291-5836/63, commercial 301-427-5836/63. This invitation is also open to naval reservists desiring recall to active duty.

In Brief . . .

Navy Vet Last Iwo Jima Flag Raiser . . . The death of Rene Gagnon, a former Marine, leaves former Navy Pharmacist's Mate John Bradley the last survivor of the six men immortalized in the prize-winning photograph of the flag raising on the island of Iwo Jima during World War II.



HCU One Reopens Harbor . . . A seven-man salvage team from Pearl Harbor, Hawaii, based Harbor Clearance Unit (HCU 1) has reopened the Tau Island Harbor in American Samoa. The men worked for more than two months, first trying to refloat a sunken craft and finally cutting it into pieces and removing it. They were commended by the governor of American Samoa for their work.

Navy Carries Statue . . . A Navy helicopter crew and ground support personnel transported a 12-foot tall bronze statue of the madonna and child to a mountain top on the Island of Capri, Italy. The 3,000-pound statue replaced another which stood on the mountain until it was destroyed by lightning. After a thorough safety check, the crew of the CH-53D Sea Stallion helicopter flew the statue up the 1,100-foot mountain, and placed it atop a 20-foot pedestal.

The Insulation That Lingers

When merchant adventurer Marco Polo sailed eastward from Europe to Asia in 1271 A.D., exchanging currency for exotic trade goods and spices, he later wrote about a mysterious tablecloth he'd seen thrown into a raging fire and retrieved without suffering damage.

The fabric was made of asbestos, a natural fibrous material that would one day revolutionize the art of thermal insulation for protection from heat and fire.

Today, seven centuries later, 800,000 tons of the asbestos fiber are used each year in over 3,000 commercial products, including everything from cigarette filters and floor tiles to insulation in the shipbuilding industry.

In April 1978, then Secy. of Health, Education, and Welfare Joseph Califano Jr., issued a warning that between eight and 11 million workers had been exposed to asbestos since the beginning of World War II. Many of these worked in shipyards during the war.

The secretary noted that exposure increased the risk of asbestosis, lung cancer, and other serious diseases, and suggested exposed persons get regular medical checkups, quit smoking, and seek prompt treatment for respiratory illness. He cautioned that the disease sometimes doesn't show up for 10 to 35 years and that smoking greatly aggravates it.



Monitoring the air following asbestos removal indicates effectiveness of removal program.



Asbestos, shown in its natural form, is the common name for a group of natural minerals that occur as masses of compact or relatively long, silky fibers.

"Workers heavily exposed in the past, particularly before the federal government began to regulate asbestos in the workplace in the late 1960s and early 1970s, may just now be facing serious health effects as a result of their exposure and may not fully be aware of the risks," said Califano as HEW kicked off a nationwide public awareness campaign.

Those mentioned most likely to be exposed to asbestos were workers in the shipbuilding, construction, mining and auto industries (those involved in brake and clutch installation and repair).

The Bureau of Mines reported 1974 use of asbestos to be 800,000 tons. Of that total, 7,300 tons were of the thermal insulation type used in ships. However, the Navy purchased almost none of it owing to then changing policies to ban asbestos wherever possible.

In June 1977, a survey of 6,640 shipyard workers at the Long Beach Naval Shipyard was conducted by Dr. Jean

Felton, the medical director. It was found that more than 1,000 workers X-rayed had some form of lung abnormality or asbestosis.

Since then, the Navy has strengthened its programs designed to monitor exposed workers and to control the current danger of exposure to asbestos dust.

"Asbestos products are totally safe when encapsulated," explained Ralph Violante, Safety Superintendent at Long Beach Navy Shipyard, "but there's a potential hazard whenever asbestos fibers are allowed to circulate freely in the air."

The Navy no longer allows installation of asbestos on ships, he added, except in certain applications like high temperature gaskets and pipe hanger liners where suitable substitutes have not been identified.

The only removal now done at the shipyard is on pipes being repaired or where loose insulation is found. While many people would favor removing all

the asbestos from ships at one time during the overhaul period, the cost to reinsulate the fleet is estimated to be several hundred million dollars.

One study conducted at the Long Beach shipyard, during a recent overhaul period aboard the amphibious ship USS *Anchorage* (LSD 36), showed a cost of about \$945,000 to remove all asbestos thermal insulation from the engineering spaces.

A revision to the policy of selective removal is under consideration.

Meanwhile, removal and disposal of old asbestos still presents certain safety problems. According to Violante, the shipyard meets those problems by fully complying with the Navy asbestos policy, which, incidentally, meets or exceeds the requirements of the Occupational Safety and Health Administration (OSHA)—the federal agency which regulates safety procedures to be used in the installation, removal and disposal of asbestos.

Safety regulations require employees who work with asbestos to wear appropriate respirators and disposable clothing, and to utilize special work



Chunks of asbestos insulation lining are cut away from a ship's boiler and then removed in impermeable color-coded plastic bags. Asbestos dust collectors, like the one on the opposite page, will be mounted on the sides of ships so that asbestos fibers can be sucked out and filtered from working spaces.

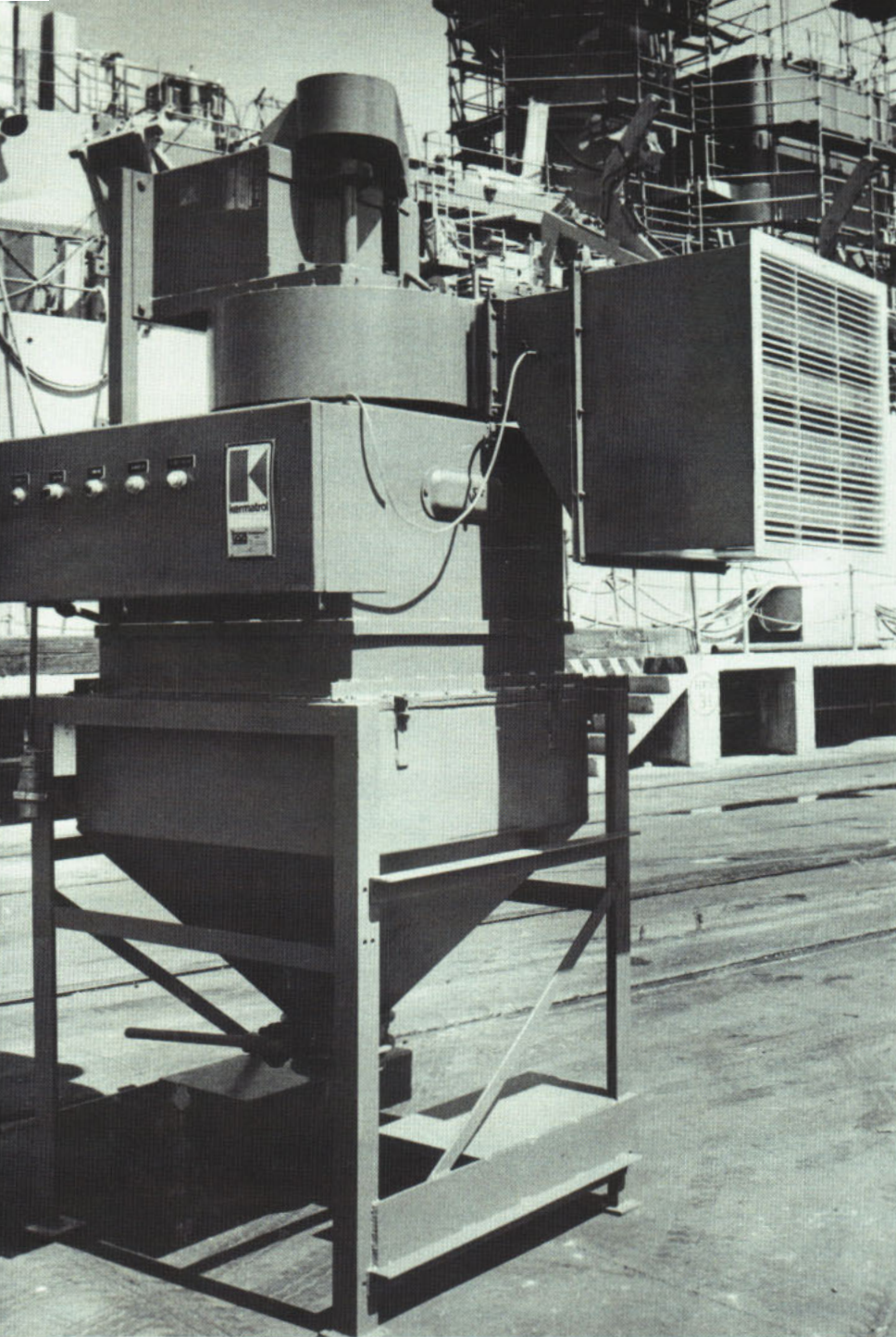
procedures, such as wetting down asbestos before removal to eliminate potential exposure to asbestos dust.

In addition, removal at the shipyard is only done at night to eliminate the possibility of non-asbestos worker exposure. The number of workers—primarily insulators—now removing asbestos from Navy ships at Long Beach is less than 20.

When a rip-out is completed, officials say the spaces are vacuum cleaned, air samples are then taken and analyzed by an industrial hygienist, to assure safe conditions before other workers are allowed to enter the work area the next morning.

As part of the safety program, a new \$198,000 dust controlled workshop area for the fabrication on non-asbestos insulation components was





completed at the shipyard a year ago. The workshop houses a change room for the removal and safe disposal of insulators' contaminated clothing, along with decontamination showers.

The shipyard has also designed and purchased four asbestos filtering systems used to suck asbestos dust from the work spaces, and is spending \$378,000 to build an asbestos rip-out facility with a controlled environment for storage and stripping of insulated pipe and machinery. The facility is expected to be completed in 1980 and will be the only place asbestos is removed at the shipyard.

Some critics of the shipyard say the Navy didn't act soon enough and doesn't have an adequate program for enforcing safety regulations. But some of the same people admit the program goes beyond those of its civilian counterparts.

"Here was the first institution that really wanted to put some money out for a medical survey," said Frank Rodriquez, president of the Long Beach Naval Shipyard Federal Employees Metal Trades Council.

"We were the only people at the time trying to get on the right track as far as awareness of asbestos goes."

L. Mike Olson, president of the Long Beach Naval Shipyard International Federation of Professional and Technical Engineers concurred.

"The important thing is that the shipyard did react," said Olson. "There's been a positive approach to the problem by management in bringing a special awareness to the employees here as to the severity of the situation and the danger in terms of the future.

"Without their cooperation," he continued, "we still wouldn't be anywhere near where we are today."

Captain James E. Kaune, the shipyard commander, admits that enforcement of existing safety regulations is an ongoing problem—not only at his shipyard, but at civilian shipyards too.

"We don't feel that some regulations are being enforced as strongly as they ought to be," said Kaune, who had declared September as "Safety Awareness Month," to emphasize all safety programs—not just asbestos.

"I think our safety instructions are well written and the course of action is fine. But there's a never ending process of having supervisors check to see if their men are fully equipped and are paying attention. It's not just this shipyard that has to have an incessant safety program—it's all of them."

The captain emphasized that asbestos insulation is safe for men at sea, as long as the asbestos is properly sealed. "You can literally sleep on top of asbestos as long as it's properly sealed," he explained. "It's the fibers you breathe that can cause asbestosis."

Dr. Felton's medical education and surveillance program, which sprang from his survey, complies with an Aug. 8, 1978, Navywide directive. It includes the medical monitoring of employees currently working directly with asbestos materials and any current shipyard employees who believe they have been exposed to asbestos in the past.

The surveillance program consists of a medical and occupational questionnaire completed by each individual, a chest X-ray, and a pulmonary function (breathing) test.

Felton emphasized that recognition

of the problem has been complicated by a lack of physicians qualified in reading chest X-rays for diagnosing the disease.

"Until recently, studies indicated there were only about 50 doctors in the United States qualified to interpret radiographs for asbestosis," said the occupational physician. "That number is now up to about 85."

X-rays taken at the shipyard are now

sent out to specialists in diagnosing asbestosis.

Felton has held about 15 medical seminars with hundreds of workers since the program began, personally explaining test results to exposed employees and stressing that susceptibility to lung abnormalities varies greatly from one individual to another. (One study of workers in an asbestos plant in the private sector showed that some workers who were exposed for only a month or two have developed asbestos related diseases many years later.)

Emphasis on safe work practices, and the hazards of smoking in combination with asbestosis, are among the

most important educational messages Felton says he's trying to get across to workers.

Meanwhile, the search for asbestos substitutes is continuing.

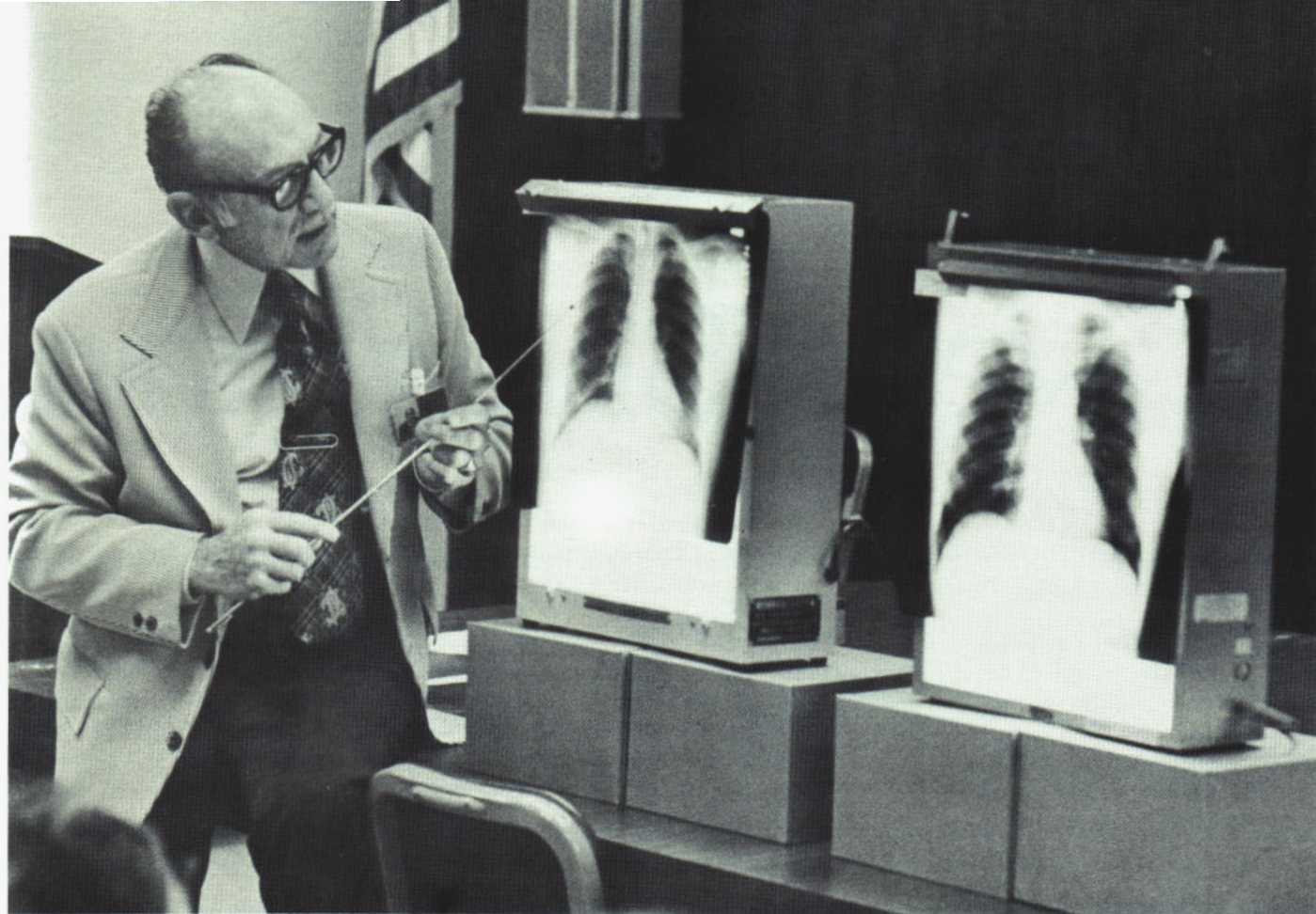
The Navy, in conjunction with HEW, the unions and employers, is helping launch a major public awareness program to alert workers previously exposed to asbestos about the health hazards. But making people aware of the hazard has been called the real problem.

As one Long Beach old-timer put it recently, "When you've been covered head to toe in asbestos most of your life, it's hard to suddenly believe it's so harmful."

Photos by C. B. Johnson

Below: Dr. John E. Basinski, Long Beach Naval Shipyard Industrial Hygienist searches for microscopic evidence of asbestos. Right: Dr. Jean S. Felton discusses the characteristics of asbestosis at a medical seminar.





Navy Searches for Asbestos Insulation

As a precautionary measure against the potential hazards of asbestos, thousands of industrial buildings at naval installations in the continental United States and Hawaii are now being examined. The purpose of the Navy survey program is to identify buildings with spray-applied insulation containing asbestos, to evaluate conditions that cause fiber release, and to determine the best methods to reduce the escape of asbestos particles into the environment.

Spray-applied insulation containing asbestos has been used for years in various types of building construction. As the material deteriorates or is damaged, the chance that hazardous fibers will escape into the environment increases.

Research at Mt. Sinai Hospital in New York City, and at Yale University reveals that fiber release in buildings, at times, approaches maximum indus-

trial safety levels established by law. On the other hand, air monitoring studies have shown that some spray-applied insulation, installed 20 years ago, has not released any detectable fibers, indicating that the degree of fiber escape depends upon the composition of the material, binding agents, applications, climatic conditions, water leakage, and physical damage.

Placing the Navy's concern into action, the Occupational Safety and Health Division in the Office of the Chief of Naval Operations directed the Naval Facilities Engineering Command (NAVFAC) last December to initiate a fact-finding survey to determine the extent of potential fiber-release conditions throughout the Naval Shore Establishment.

The first phase of the two-phase survey called for the examination of 2,000 preselected structures at various geographical locations, as an indica-

tion of the overall problem posed by spray-applied asbestos insulation. Phase I was completed this past summer. Phase II will examine the remaining 20,000 Navy buildings, while a separate study will examine certain family housing units. Phase II is scheduled to run until the summer of 1980.

NAVFAC appointed Civil Engineering Laboratory as technical manager of the survey. The laboratory provides the sampling kits and test procedures used by inspectors at the various commands. If asbestos is found, Navy industrial hygienists conduct air monitoring tests to determine the amount of fiber release.

Once a building has been sampled, insulation contents identified and air monitoring completed, a CEL guidance document provides the Public Works Officer and planning estimator with directions to correct and control asbestos exposure.

Denver's 'Ship Within'

STORY AND PHOTOS BY
JO2 DENNIS K. BOHANNON

During a training exercise somewhere in the Western Pacific, a Navy landing craft slams into a beach to unload a detachment of Marines. With the assault team ashore, the craft backs down and heads out to sea.

It disappears from sight, swallowed up by a larger ship anchored off the coast.

That larger ship is the amphibious transport dock USS *Denver* (LPD 9).

The 340-ton landing craft unit inside her gray hull is LCU-1666 commanded by Chief Boatswain's Mate Donald R. Thurston.

"Hardest part of this job," said Thurston, "is getting the landing craft into *Denver's* well-deck. It's sort of like trying to get a Continental into a VW garage on an oil-slicked driveway during an earthquake. It's not easy."

Inside *Denver's* flooded hull, LCU-1666—"U-Boat" to her crew—is secured with chains, steel cables and hooks. Like umbilical cords, tubes and

hoses join the craft to the mother ship. "*Denver* supplies our water and television," said Thurston. "Other than that we're pretty much independent."

To the Gator Navy, the landing craft is aptly called the "ship within." More often than not, the "ship within" operates independently—outside the gray walls of the mother ship and under the power of her own four diesels.

Looking like a toll bridge with ramps at both ends and a pilot house off to one side, the landing craft frequently transports marines and their tanks to beach landing sites for maneuvers. In wartime, units like LCU-1666 ferry cargo up and down rivers and coastlines, carrying men, tanks and bulldozers ashore.

On occasion, the "U-Boat" and her crew of 10 travel hundreds of miles to load or unload equipment and supplies or carry Navy men from one location to another.

In port, when *Denver* lies anchored off shore, the landing craft becomes a liberty launch to carry sailors and visitors to and from the beach and other ships.

At their berth inside the dock ship, the crew eats, sleeps and works aboard their LCU. Shipboard routine is much the same as on other ships. The crew performs repairs and preventive maintenance. Mud is washed off the deck; bumps and dents, left by tank drivers whose skills are more suited to the wide open spaces, are smoothed out and painted.

"She takes quite a beating when we're out and working," said Engine-



Getting the LCU 1666 into Denver's well deck is something like driving a luxury auto into a garage made for a compact.

man First Class Robert H. King, second engineer.

"Because there are a limited number of WestPac deployments available to LCUs, the volunteer list to serve aboard is long," said Chief Thurston. Most of his crew reenlisted to get into the unit.

When selecting his crew, Thurston

looks for men who can get along well with each other. "We're a small unit and we have to make a lot of adjustments for each other."

Small unit or not, the crew on board LCU-1666 is proud. Their craft sports the red "E" for excellence in engineering and the Amphibious Assault Award for being tops in landing operations.

Another thing that makes for this happy crew is Mess Management Specialist First Class Laureano H. Galbadores, the ship's cook. Galbadores admits that it's a bit tougher working on

an LCU. He says that when he's not aboard, the men have to fend for themselves in the galley, which is always open for snacks.

"They never complain," he said. "They just keep asking, 'What's to eat?' I know what they like and I just cook."

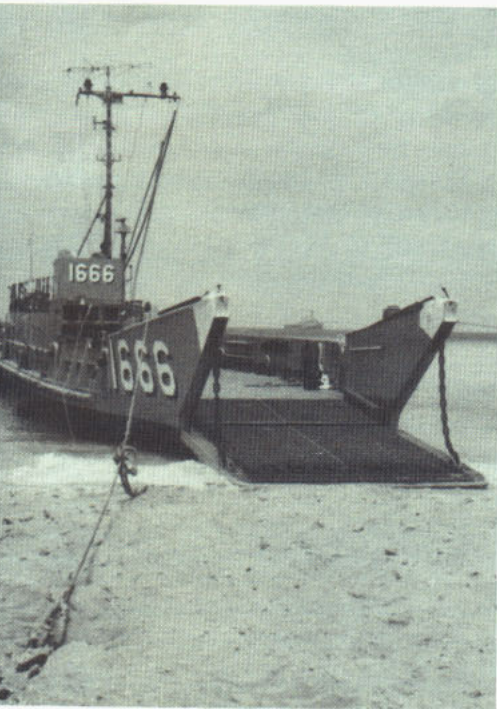
Their galley is complete with almost every convenience. There also is a laundry, a crew's lounge, sleeping quarters for 14, and even a stateroom for the skipper.

When the day's work is done, the men relax—drink coffee in the galley or enjoy the air-conditioned TV lounge.

"We're kind of a family, very closely knit," said Radioman First Class Gary A. Mann. "On liberty, we don't all go together, but it usually turns out that we all end up at the same place." ↓



Left: Chief Boatswain's Mate Donald R. Thurston has what everyone wants—a ship of his own. Left, below: Looking like a misplaced toll bridge, the LCU 1666 sits on the beach with both ramps down. Below: MSI Galbadores enjoys working in the LCU's small but efficient galley.



USS Albany

Five Days in Monte Carlo

STORY BY JO1 KEN DUFF
PHOTOS BY PH1 JOHN LUCAS

Most Americans dream of a vacation to Europe, visiting far off lands across the sea. Usually these places are seen only in movies or through postcards.

Today's American bluejacket not only has the opportunity to visit those lands, but also to take part in famous events such as the Cannes Film Festival or the Grand Prix Race.

Following a two-week deployment as part of the annual North Atlantic Treaty Organization exercise "Dawn Patrol," the 1,000-man crew of the guided missile cruiser USS *Albany* (CG 10) visited the tiny Principality of Monaco during the annual Monaco Grand Prix. It was the first visit of a 6th Fleet flagship since USS *Springfield* (CLG 7) visited Monaco six years ago.

"It was more than just a visit to Monte Carlo," said Yeoman Third Class Michael F. Silva. "We had the opportunity to view the race firsthand. It really was an experience."

Famed for centuries—more recently as the playground of the "jet set"—Monte Carlo opened her doors to the American bluejackets with tours

On liberty in Monte Carlo, Albany crew members stroll along Yacht Harbor and through the shopping center, meet winning driver Jody Scheckter of South Africa and join the crowd that came to watch the 37th Grand Prix.





USS Albany

of local sights, including the famed Oceanographic Museum and Aquarium. As they say, "Anyone who's bored in Monaco is boring!"

Monaco consists of 465 acres and is about half the size of New York City's Central Park. It has a population of 24,000; about 5,500 are native born. A hereditary and constitutional monarchy, Monaco has been headed by the Grimaldi family since 1297. The present monarchs are Prince Rainier III and (American born) Princess Grace (Kelly).

"A visit to Monaco is always enjoyable," said Engineman Second Class Dirk A. Scott, "but to be able to see the Grand Prix is another thing. The race added so much more to the visit.

"Being from Gas City, Ind., I have seen many an Indianapolis 500 race, but that's an entirely different style."

The Monaco Grand Prix is the only grand prix in Europe held on city streets. This year, the 37th annual, saw South African Jody Scheckter take first place honors in his No. 11 Ferrari. Famed for its high-pitched noise, speed, and sheer danger, the Monaco Grand Prix is one of the more expen-

sive races on the European circuit.

More than 250 *Albany* crew members were provided reserved seating on the 3,312-meter course for the simple "fee" of wearing their uniforms. As one sailor put it, "The people right across from us were paying \$50 for their seats."

"Not only did we have the opportunity to see the various sights," said YN3 Silva, "but along with the race,

we had ample time for the beaches and to try our luck at the casino."

Special for most Americans, this year's race was the first since 1962 that an American driver was defending his world championship. Veteran circuit driver Mario Andretti of Nazareth, Pa., drove No. 1, a Lotus from the Martini Racing Team. Andretti provided his usual performance for the loyal fans who traveled thousands of miles to see him in action.

"Andretti was up to his top daredevil style of high-speed driving," said EN2 Scott. "I have seen Andretti in other races, including Indianapolis," said Scott, "and he always provides a thrilling show. I asked him why he chose Monaco rather than 'Indy' in 1979 and he said that he enjoys this type of racing more than oval tracks."

Andretti took the time to talk to the visiting Navymen. After the race, he paid a visit to *Albany* where he spoke to many crew members, signed autographs and posed for photographs.

After the exciting five-day stay, *Albany* and her crew departed for her home port of Gaeta on the Italian Riviera. That's another nice place! ↓



Plenty to see at the Grand Prix: a wind-blown spectator, American driver Mario Andretti, and the No. 12 Ferrari driven by Canadian Gilles Villeneuve.



Bearings

Epilogue

All 15 planes of Torpedo Squadron Eight, along with 29 of the squadron's officers and men, were lost that fateful day—June 4, 1942. The lone survivor of Torpedo 8, wounded in the left arm and hand, watched the remainder of the Battle of Midway from the surface of the sea.

There was one chance in a thousand that Ensign George H. Gay would live out that day, let alone the war. Then, after the battle, along came a PBY patrol plane; the sharp eyes of C. E. "Bill" Harmon picked out ENS Gay. The 25-year-old pilot was later rescued.

In the attack against the Japanese carriers *Kaga*, *Hiryu*, *Soryu* and *Akagi*, Gay said that falling planes looked like bits of orange peel being thrown into the water from a speedboat.

"I can't say one way or another when my plane got hit," Gay recalled years later. "I heard my gunner say, 'I'm hit' (they were flying from the carrier *Hornet* in a slow moving, VTB *Devastator* torpedo bomber). I looked back and he was slumped down. He never said anything else.

"I was hit in the left arm and hand, but I reached over with my right hand and released the torpedo. I must have lost consciousness just before my plane went down. The next thing I knew I was in the water and, from that vantage point, I became an eyewitness.

"I saw every one of the airplanes go down. I knew the pilots and crewmen were killed because when planes go down like they did, you find no survivors.

"All the carriers were hit by dive bombers and when all the bombing stopped, I was the only American left alive (on the scene)."

Gay stayed in the water for about 30 hours before he was rescued. Yet, he

knew he would be rescued—"I had faith in the system and knew Admiral Halsey would take care of his men."

Item 32 of Admiral Chester W. Nimitz's report on the Battle of Midway, dated June 28, 1942, stated:

"Not a plane survived this magnificent devotion to purpose. One pilot, after attacking and probably hitting the *Kaga* at close range, with his gunner already killed, crashed near the *Akagi*, ducked under his seat cushion to prevent being machine-gunned, and from this reserved position observed the fierce attacks that followed."

That was 37 years ago. Just recently, at NAS Jacksonville, Fla., George H. Gay met his 1942 rescuer and paid him off with the traditional bottle. Normally, that debt would have been paid years ago but with the war and all, the ceremony got lost in the shuffle.

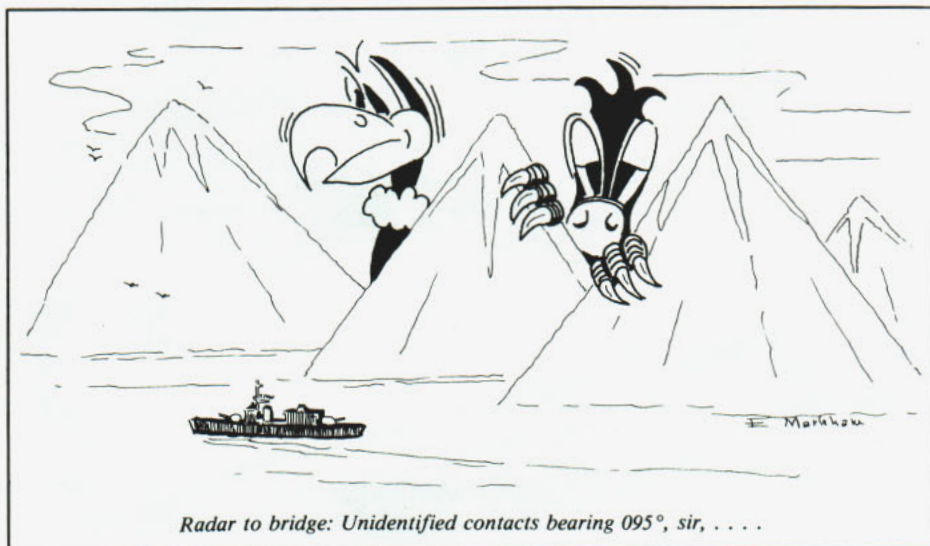
Gay, a member of the Navy League, had put in a career as a pilot with Trans World Airlines. Harmon today heads up a vehicle preparation center in Jacksonville for a large automobile company; he completed a 20-year Navy career. An item in a local newspaper about Gay caught Harmon's attention.



George H. Gay (right) and C. E. Harmon meet again after 37 years.

His reaction was: "This guy owes me a fifth."

It was an emotional meeting at the local CPO Club—arranged by Navy recruiters in Jacksonville. George Gay was more than glad to pay off his debt. He described his meeting with Harmon as one of the most rewarding experiences of his life, perhaps topping even that day in 1942.—JOC Al Clark

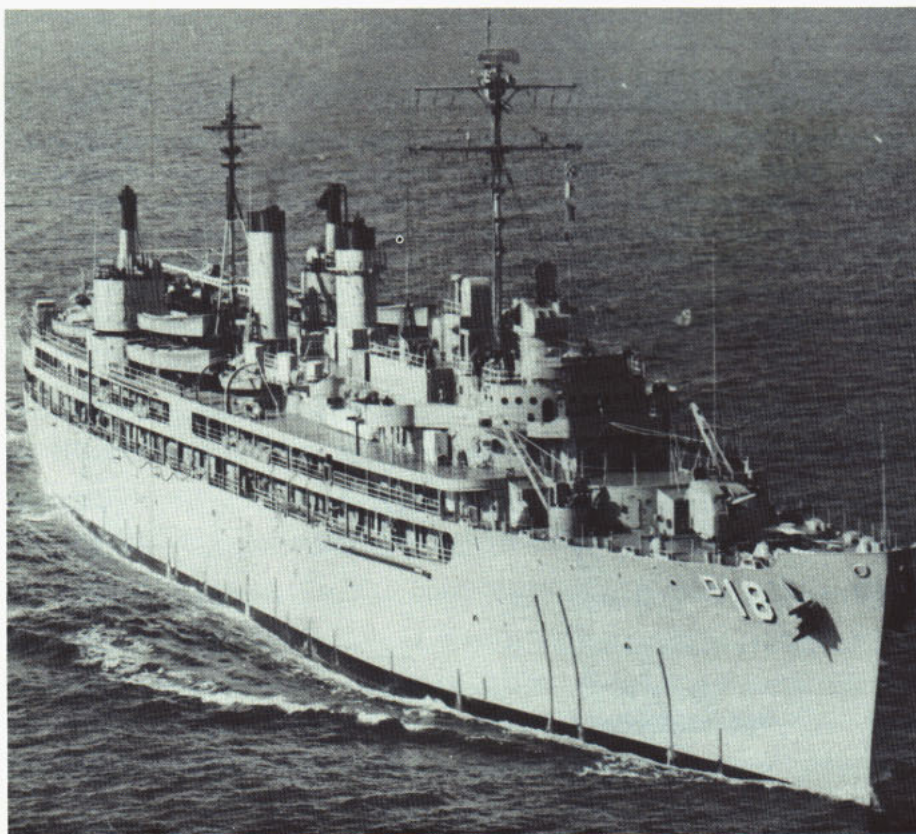


Bearings

Sierra on Duty

The "grand old lady" of Service Squadron Eight is celebrating her 35th birthday this year—the destroyer tender USS *Sierra* (AD 18). Since commissioning in 1944, *Sierra* has served in the Pacific, Atlantic and Indian Oceans and the China, Philippine and Mediterranean Seas. She is currently homeported in Mobile, Ala.

Sierra's mission is providing repair, supply and technical support to Atlantic Fleet ships—a mission for which she has been commended by many of her "customers." Far from being "welded to the pier," *Sierra* has steamed over 34,000 nautical miles during the past two years and has been on three-section duty for 12 of the past 24 months.



Sierra is currently undergoing overhaul and is expected to return to the active fleet in 1980.

Albany Takes Cup

Her name is the 54th to be engraved on the Battenberg Cup, yet USS *Albany* (CG 10) is only the second U.S. Navy ship to be awarded the cup for operational excellence. The 52 other ships listed took the cup in fleet rowing competitions. Confusing? Well, we'll back up a bit.

It all started in 1905 when Britain's Prince Louis of Battenberg was so impressed during a goodwill visit to America that he gave the British Challenge Cup to the U.S. Navy. The cup

was sought by British and American rowing crews between the years 1906 and 1940 when, with the second World War, the competition was put aside for the duration.

Last year the cup was taken out of mothballs by then Commander in Chief, Atlantic Fleet, Admiral Isaac D. Kidd Jr., and reinstated, this time for battle efficiency within the fleet. The submarine tender USS *Holland* (AS 32), stationed at Holy Loch, Scotland, took the cup in 1978; this year, *Albany* was named the top ship, besting some 250 other Atlantic Fleet units.



Albany was selected for overall battle efficiency performance with extraordinary performance and achievements in her primary mission. The guided missile cruiser, homeported in Gaeta, Italy, also was cited for career motivation and retention, community involvement, safety and morale.

The cruiser has been awarded the Battle Efficiency "E" award, eight of nine departmental efficiency awards and has been a type commander's retention "superstar" for eight months of the past fiscal year. *Albany*, commended many times for her operational preparedness and proficiency, maintains her commitment to community awareness and assistance projects through high crew retention and excellent morale.

Notable British military leader, the late Admiral of the Fleet Lord Louis Mountbatten, son of Prince Louis, was the guest of honor and speaker during ceremonies held in July in Gaeta aboard *Albany*. Vice Admiral Joseph P. Moorer, Commander in Chief of U.S. Naval Forces in Europe, presented the trophy to the ship.



Saving Fuel

Norfolk Naval Shipyard (NNSY) is doing a lot more than talking about energy conservation. In cooperation with the city of Norfolk, NNSY is burning trash to produce steam and save fuel oil in the bargain.

The Navy's largest shipyard, NNSY generates about 180 tons of refuse a week. Additionally, the shipyard, which is located in nearby Portsmouth, has agreed to burn 200 tons of trash a week for the city of Norfolk. As a result of the NNSY-Norfolk contract, the shipyard estimates its refuse burning plant (capable of handling 400 tons of refuse a week) will save over half a million gallons of fuel by next summer.

The refuse plant, built in 1977 at a cost of \$4.2 million, operates 24 hours a day, five days a week, producing 10 percent of the steam used by the shipyard.

U.S. Team Takes CISM

The U.S. team captured first place, Sweden second and Norway placed third in the annual international military sports meet. Officially known as the Conseil International du Sport Militaire (CISM), the event was held this year at Naval Amphibious Base, Coronado, Calif.

More than 60 military personnel representing eight countries competed in two events: a sailing race and a naval pentathlon consisting of an obstacle course, lifesaving, a swimming race, utility swimming, seamanship boat races and an amphibious cross-country race.

The U.S. CISM team with their First-Place trophy (l-r): LTJG Ray Cottam, LT Brian Robins, LT Rex Hand (team captain), CDR Irve C. Lemoyne, HT2 Robert Augello and QM2 Charles Johnson.

Lieutenant Rex Hand, a Navy SEAL assigned to Special Warfare Group One in Coronado was the top individual athlete in the five-day meet. He set CISM records in lifesaving and swimming.

CISM competition is sponsored by military organizations worldwide to promote good will through sports competition.

Reminder...
Aliens must register
during January.

Bearings



King-sized Idea

"It was simple, that's probably why nobody ever thought of it before," said Aviation Electrician's Mate Second Class Richard L. King about his idea to "wire it the other way and add a fuse." Simple or not, the idea brought him a \$1,500 award and is expected to save the Navy nearly \$400,000 a year.

Assigned to Attack Squadron 94 at Naval Air Station Lemoore, Calif., Petty Officer King became annoyed by the frequent need to replace or repair a burned-out battery pack. He decided there must be a better way.

Approximately the size and shape of a cigar box, the battery pack is part of the back-up power source for A-7E jet navigation equipment.

Receiving power during normal operations, the reserve battery had a tendency to short-circuit. King designed a different wiring layout and added

a breaker fuse. He then submitted his design to the Navy Incentive Awards Board for evaluation.

The result: The Board decided to adopt King's modification Navy-wide; with some of the \$1,500 award money, King took his family to Disneyland to celebrate.—*Kay Stokes.*

Flying High

The "Fighting Frogs" of VT-19 have done it again. To add to their long list of safety awards and citations, Training Squadron Nineteen from Naval Air Station Meridian, Miss., recently received the Meritorious Unit Commendation awarded by the Secretary of the Navy. The citation recognized the squadron's outstanding achievement of 80,000 flight hours without an accident during a period in excess of six years.

The achievement "was unparalleled in the annals of the Naval Air Training Command," said Captain W. W. Hargrave Jr., Commodore of Training Air Wing One, when he presented the commendation to the squadron on behalf of then Secretary of the Navy W. Graham Claytor Jr.

Since the presentation ceremony in June, VT-19 has logged in another 8,000 hours to complete yet another year of accident-free flight.

Since its creation in 1971, the squadron has received three Chief of Naval Operations Safety Awards, two Vice Admiral John H. Towers Flight Safety Awards, seven Chief of Naval Air Training Accident-Free-Year Awards, and the Vice Admiral Robert Goldthwaite Award for training efficiency.

Clean Solution

Sailors accustomed to getting "washday blues" upon receiving their laundry from the cleaning plant will now find relief. A new laundry training facility—the first offering "hands-on" training—was recently completed at



Ship's Serviceman class "A" school at the Naval Technical Training Center, Meridian, Miss.

Students will receive step-by-step instruction in laundry management and operations in the \$200,700 facility. Pressers, washers, dryers and a complete dry cleaning plant will give students practical experience in laundry operation. They also learn about record keeping, receiving and issuing, sorting, fabric identification, stains and removers, and the use of marking machines to identify ownership.

Thanks to this new training for ships' servicemen, sailors will find their laundry service faster, clothing and linen cleaner, and there shouldn't be any more washday blues.—JO2 Olin White.

From Sea to Sea

From the Norwegian Sea to the Caribbean, a squadron of frigates and destroyers patrols the North Atlantic sea lanes. They are the ships of the Standing Naval Force Atlantic (STANAVFORLANT).

Whether at sea or in port, the ships of STANAVFORLANT are an alert force able to respond on short notice. They form the nucleus of a more powerful and versatile NATO naval force which could be formed if necessary.

Traveling thousands of miles annually, the NATO ships conduct drills in anti-aircraft and anti-submarine warfare, communications, gunnery, and

at-sea replenishments. During international exercises, submarines, cruisers and supply ships frequently join the squadron.

While the ships are in port, crews exchange visits, and ships welcome local citizens aboard for tours, luncheons and children's parties. These cultural activities strengthen the bonds of friendship between NATO nations.

Formed in 1968, the Standing Force is the world's first permanent multinational naval squadron to operate together in peacetime. It is a floating force that has become an integral part of NATO's defense alliance. STANAVFORLANT is currently under the command of Captain G. M. Carter Jr., USN, whose flagship is USS *Luce* (DDG 38).

Okinawa on Course

For the second consecutive year, USS *Okinawa* (LPH 3) has won the Admiral Flatley Memorial Award. It is given annually to the LPH/LHA squadron team that has surpassed all competitors in overall contributions to aviation safety.

Rear Admiral David G. Ramsey, Commander Amphibious Group Eastern Pacific, presented the award to the officers and men of *Okinawa* and her embarked Marine Medium Helicopter Squadron (HMM) 165.

Sponsored by the Columbus Aircraft Division of Rockwell International, the award recognizes *Okinawa* as the safety leader in her competitive class. *Okinawa* also won the Flatley Award

in 1966. USS *Tripoli* (LPH 10) and HMM 262 were this year's runners-up.

Vice Admiral James H. Flatley was a

naval aviator whose interest in accident prevention set the pace for the Navy's accident prevention program.

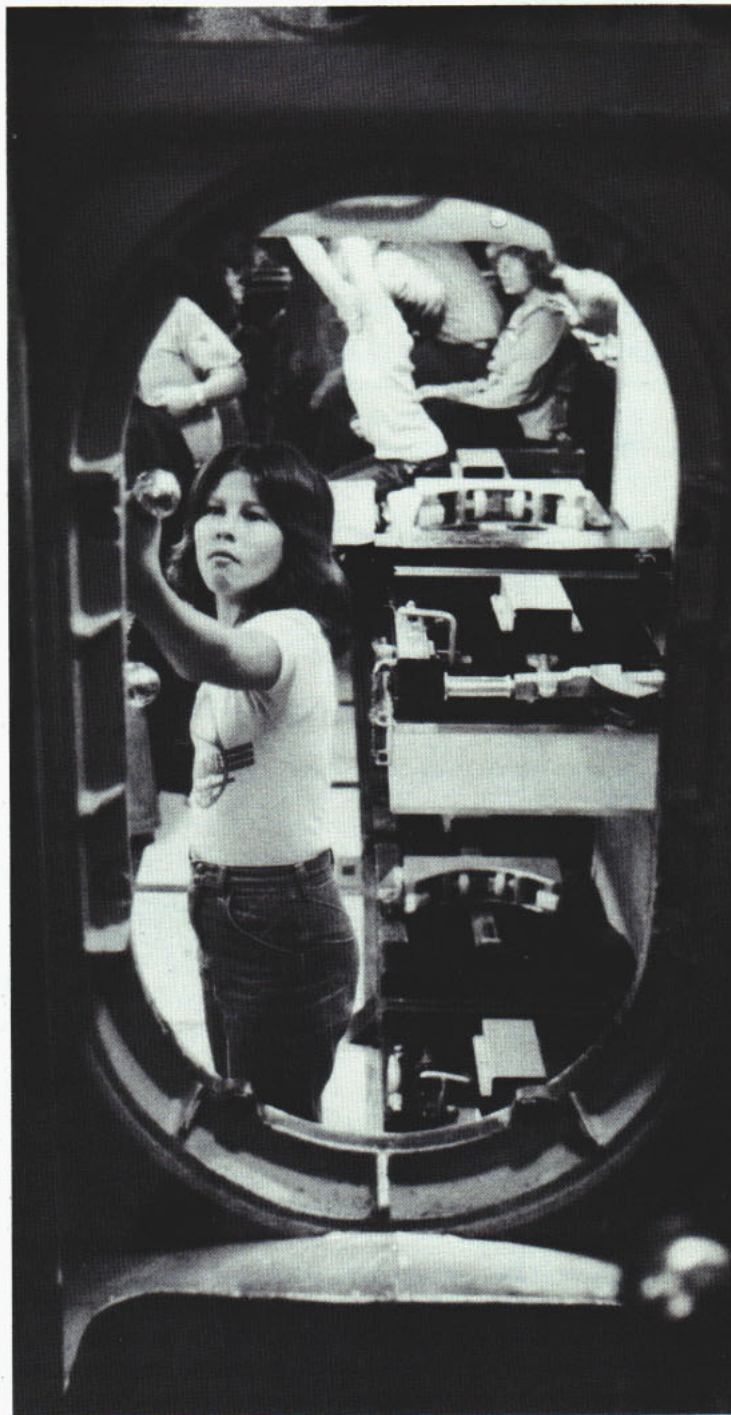


With the Flatley Award (l-r): RADM David G. Ramsey, Commander, Amphibious Group Eastern Pacific; LCDR John Francel, Assistant Air Boss; CAPT B. R. Boland, commanding officer; and CPO Paul Gallegos, flight deck chief.

Getting



Guests were everywhere: in the control room (above) with Quartermaster Seaman Tom Cain at the plotting board, and in the torpedo room where compressed water slugs were fired through the tubes.



a look at Lee

BY JO2 BOB COWAN

Ever wonder what it would be like to take a cruise aboard a nuclear-powered fleet ballistic missile submarine?

Taking advantage of a rare opportunity, about 100 dependents and guests of USS *Robert E. Lee's* (SSBN 601) "gold" crew found out what it's like when they recently took a one-day cruise off Hawaii.

They boarded *Lee* apprehensively but, once aboard, the guests showed their excitement as the sub submerged into a strange new world.

The new hands split into small groups because of the sub's close quarters. Visitors learned firsthand how fresh water is produced. Also, they discovered that food, besides being stored in regular compartments, is stocked wherever space is available.

During the cruise, the visitors stopped in the sonar room where they listened to dolphins on sound recorders. They toured the crew's berthing quarters; today's subs are bigger and more comfortable than diesel boats of earlier years. "It actually looks kind of homey," one guest said.

The main attraction was the control room, *Lee's* nerve center. Visitors watched as navigators studied charts and worked at plotting boards while other technicians kept a sharp eye on instrument panels.

Younger visitors stood spellbound as "torpedoes" (compressed air/water slugs) were fired following a prelaunch countdown. Most took turns at the periscopes to watch the simulated firing operation.

All were excited when the demonstration of diving angles brought the sub to various inclines.

At lunchtime, crewmen and their guests sat and talked in the crew's



mess. Lunch over, the kids got a chance to rest and watch a movie.

Some guests were relieved and others were disappointed when, after five hours submerged, *Robert E. Lee* surfaced and returned to Pearl Harbor's submarine base.

Afterwards, one wife said, "I'm glad it's him down there instead of me. Five hours is fine, but I can't imagine two months of this."

Sharing the good food aboard Lee is made more enjoyable because of the service.

For the youngsters, though, they can't wait to go out again: "WOW! Let's do it again." ⚓

Dahlgren: Father of modern naval ordnance

BY CAPT L. G. HOLMBERG

Accurate and deadly, today's rocket boosted, laser guided projectiles are a far cry from the "soda-water bottle" cannons of the last century. Today's weapons are, however, a product of many earlier designs.

For more than a hundred years, a

countless number of scientists, engineers and technicians working in laboratories, and sailors operating the big naval guns on combat ships, have contributed to modern naval weaponry. One man, however, deserves more credit for this development than

any other—Rear Admiral John Adolphus Dahlgren, "father of modern naval ordnance," and one of the most competent technical officers ever to serve in the United States Navy.

Admiral Dahlgren was born in Philadelphia, Pa., Nov. 13, 1809.

The famous eleven-inch Dahlgren gun on a slide-pivot mounting in operation aboard a Navy warship during the Civil War. Photograph courtesy of the Matthew Brady Collection, National Archives.



He was educated in Quaker schools until age 15, when his father died. Young Dahlgren applied for a midshipman's appointment in the Navy but his application was at first refused. Fortunately, he prevailed and he received his appointment Feb. 1, 1826.

His first cruise was in *Macedonian*, a British ship captured in the War of 1812. Midshipman Dahlgren served six years, passed his examination and was promoted to Passed-Midshipman.

Already noted for his proficiency in mathematics, he was detached from regular service and assigned to the Coast Survey, today's National Ocean

Survey. He participated in the Survey from 1834 to 1836 when he was elected to assist in making observations of the solar eclipse of that year. He later became second assistant in the survey and head of a triangulation party—the first naval officer ever to hold such a position.

In the spring of 1837—after 11 years in the Navy—Dahlgren was promoted to lieutenant and received orders to sea. However, his eyes began to fail and he had to retire from active service. Two years later, he married Mary C. Bunker of Philadelphia and moved to the country to regain his health.

After four years he had recovered sufficiently to return to active service.

Lieutenant Dahlgren left his family of three children in the country and went to sea in the frigate *Cumberland*, cruising in the Mediterranean. While serving in *Cumberland*, he produced his first ordnance invention, a perforated hammer.

He was ordered in January 1847 to duty involving ordnance manufacture and testing at the Washington Navy Yard. Finding the facilities at his disposal inadequate, Dahlgren planned and proposed an ordnance workshop at the yard.

He was also given additional duty as part-time instructor at the new Naval School in Annapolis, after he had refused an offer to head up the school's department of gunnery.

He began experiments on armament for ships' boats in 1849, developing the "boat howitzers," a type of gun suited to both field and naval service and later used extensively during the Civil War.

After a near-fatal accident that November when a cannon burst in testing, Dahlgren began designing a completely new nine-inch shell gun which would be able to withstand the great pressures created by heavy shells. His subsequent study of bore pressures was the first such scientific study in the United States.

In July 1850, he proposed that frigates be built with ten-inch pivot guns on their spar decks and nine-inch shell guns on their gun decks. Such a radical change to the ship's armament was not acceptable to his superiors, however, and his proposal had to wait.

In 1856, the year after he was promoted to commander, Dahlgren finally succeeded in gaining recognition of his concept of large caliber guns with the arming of the new steam frigate *Mer-*



Rear Admiral John A. Dahlgren by Matthew Brady.

Grains of Salt

rimac with nine-inch Dahlgren guns. *Merrimac's* gun trials proved the weighty weapons to be manageable. They possessed greater range, accuracy and durability than earlier heavy guns.

With his reputation growing, Dahlgren published several works on ordnance which brought him worldwide attention. From June to December 1857 he was at sea in *Plymouth* proving the effectiveness of her armament—one 11-inch and four nine-inch Dahlgrens, three howitzers and 100 rifled muskets of his invention.

In protection of American interests, he cruised off the Mexican coast from May to December 1858 and returned to Washington in 1859 for further work on rifled ordnance. His work in this area, as with most of his ideas, was ahead of his time and he received little support from his superiors. His Dahlgren guns, however, became the standard armament for the frigates of the United States Navy, and his plans

for the arrangement of shipboard armament were adopted by many European and South American navies.

At the outbreak of the Civil War, upon the departure to the Confederate service of all officers senior to him at the Washington Navy Yard, Dahlgren succeeded to command of the yard. He became a close friend and adviser to President Abraham Lincoln who was impressed with Dahlgren's ability and ingenious mind.

Dahlgren directed the tremendous wartime production at the Gun Factory, continued his research, and worked closely with John Ericsson in ironclad development. In July 1862, he was made Chief of the Bureau of Ordnance and was promoted to captain the following month. In February 1863, his contributions were recognized by a vote of appreciation from Congress and his subsequent promotion to rear admiral.

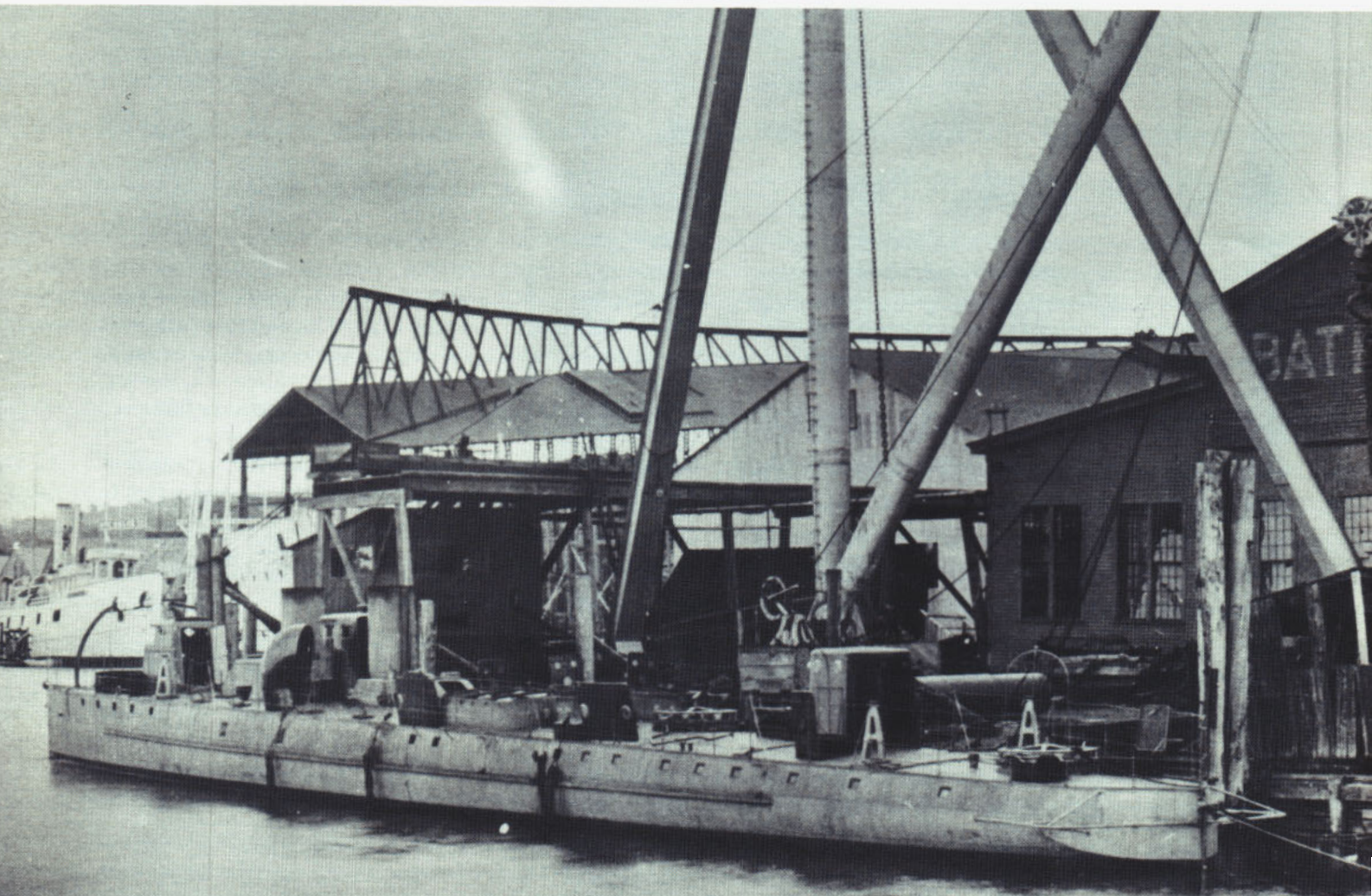
Admiral Dahlgren's intense desire

for combat duty was finally fulfilled in July 1863 with his selection as Commander of the South Atlantic Blockading Squadron. His service in this post lasted until June 1865 and included participation in the bombardment of Fort Wagner and cooperation with General Sherman in the capture of Savannah.

Beginning with their first battle test in the *Monitor-Merrimac* duel, and through every naval engagement of the war, his new weapons proved their superiority. Dahlgren's inventions had revolutionized naval ordnance, set a new standard for the world's navies and contributed to the end of the wooden fighting ship.

After the war, Rear Admiral Dahlgren commanded the South Pacific Squadron, then returned in 1868 to Washington as Chief of the Bureau of

USS Dahlgren (TB 9) fitting out at the Bath Iron works, Bath, Maine, about 1900.





USS Dahlgren (DD 187) leaves the Philadelphia Navy Yard (1931).

Ordnance. Preferring research to administration, he requested reassignment as commanding officer of the Washington Navy Yard. He died at age 60 on July 12, 1870, in Washington. He is buried in Philadelphia's Laurel Hill Cemetery.

In her "Memoir of John A. Dahlgren," the Admiral's widow, Madeleine Vinton Dahlgren, whom he married in 1865 (his first wife died 10 years before), wrote: "As yet (1882), the country which Admiral Dahlgren served with such consuming zeal and which has reaped such enduring benefits as the result of his inventive genius and unstinted loyal service, has not erected to his memory, or to that of his hero son (Ulric, a 21-year old colonel killed in the Civil War), any monumental semblance in marble or bronze, or made any adequate recognition of his merits."

But recognition and memorials to

the admiral did materialize. The United States Navy has honored Rear Admiral Dahlgren over the years by naming three ships after him. The first *Dahlgren* was 151-foot torpedo boat destroyer (No. 9), the second was the 314-foot destroyer (No. 187), and the third is the currently active guided missile frigate (ex-DLG 12—now DDG 43).

Over the years the Navy has also honored Admiral Dahlgren by naming buildings and streets for him on many naval installations, particularly those involved in ordnance training. However, the two most significant and long-lasting memorials to the admiral are Dahlgren Hall at the U.S. Naval Academy, Annapolis, Md., and the Dahlgren Naval Surface Weapons Center (NSWC) and Laboratory at Dahlgren, Va.

Dahlgren Hall at the Academy served for many decades as the training ground for thousands of naval officers who received their introduction to naval gunnery. When the Navy moved into the missile age, the traditional

armory building was converted into a recreation facility. Though still bearing his name, Dahlgren Hall is no longer associated with weapons and guns but it still serves midshipmen.

The history of the Dahlgren Naval Surface Weapons Center goes back many years to the time when the Navy was operating a weapons proving ground at Indian Head in Maryland—about 30 miles south of Washington, D.C., along the Potomac River. As the population increased along the river, it became more difficult to test the ever increasing size guns which required larger charges of gunpowder.

In April 1918, Congress authorized the president to take over 1,366 acres of land between Machodoc Creek and Lower Cedar Point Light on the Potomac. In addition, Blakistone Island, located about 15 miles down the river from the newly acquired land, was also given to the Navy.

Known as the "lower station" of the Indian Head facility, the new area began its role as a proving ground in October 1918. On Jan. 15, 1919, it was

Grains of Salt

officially named for Rear Admiral John Adolphus Dahlgren.

At the beginning of World War II, the Dahlgren Weapons Laboratory was created at the proving ground for research and development. The “Manhattan Project” for development of the atomic bomb was one of the lab’s first projects.

When defense technology shifted to missiles, Dahlgren lab was chosen to head up the *Polaris* Ballistic Missile Program. In the 1960s, the lab’s computer center increased in both size and prestige as it began to conduct studies of the *Poseidon* and Transit Navigation Satellite Programs.

Dahlgren Laboratory initiated the concept of guided projectiles fired from naval guns. This opened new doors in such areas as fire control, electro-optics, ballistics and guidance. The early 1970s produced the first five- and eight-inch laser guided projectiles as well as new gun fire control systems that required advance computer technology.

In 1974, the Navy consolidated the Naval Ordnance Laboratory, White Oak, Md., with the Dahlgren Weapons Laboratory, to form the Naval Surface Weapons Center—the Navy’s largest research development test and evaluation center.

As weapons research and development goes forward, the Dahlgren name will continue to be associated with new inventions and new ordnance technology, in honor of the man who pioneered this field for the Navy—the man regarded as the “father of modern naval ordnance.” ↓

A proud name lives on in the USS Dahlgren (DDG 43), the third Navy ship named after the admiral; the Naval Academy’s armory, Dahlgren Hall.



Light and highly portable

BY LT J. M. CHERRY

If safety regulations are ignored, any Navy job can become potentially dangerous. But some hazards aren't covered by the regs. For example, what procedures would you follow if a polar bear decided you looked tasty?

You'd probably do exactly as the eight men of Underwater Construction Team Two's (UCT 2) Arctic West Detachment did when faced with just such a situation. You'd become, as the team's motto touts, "light and highly portable." Being fleet of foot, however, didn't stop the bear from damaging the team's main camp which had been set up for a recent deployment to the arctic to install an underwater hydrophone array.

When the divers left Nome, Alaska, aboard the Coast Guard icebreaker *Northwind* (WAGB 282), polar bears were the least of their worries. They were more concerned about the equipment they would use on their dives under some 14 feet of ice to depths of 90 feet. But before the job was finished, UCT-2 would learn to cope with the extremely harsh environment and its effects on equipment and men.

Selection of equipment was critical. The divers chose the single hose regulator with external thermal protection of the first stage as the scuba gear best suited for the frigid environment. For body protection they chose the variable volume dry suit which uses a cushion of air to insulate the diver from the extreme cold. Even with the best equipment, there are limitations.

A serious problem which can occur under arctic diving conditions is regulator freeze-up. Despite the fact that freezing can be minimized by covering the first stage block with a rubber cap filled with an antifreeze solution, continuous purging of the mouthpiece for more than five seconds can cause a freeze-up.

The dry suit isn't without problems.

A rip in the suit or parting of a zipper can cause an immediate loss of buoyancy along with thermal shock—it doesn't take long for a diver to freeze to death when not protected by the suit.

Special precautions were also taken for air compressors by using oil specifically designed for cold weather use. Diesel air compressors were fueled with arctic diesel fuel to reduce the possibility of paraffin formation in the fuel, and filters were carefully drained before compressor shutdown to prevent moisture freeze-up when not in use. In addition, wind direction was closely monitored to ensure the air intake was always upwind of the compressor exhaust.



"In spite of the precautions taken with the equipment," said Steelworker First Class John D. Hunter, petty officer in charge of the UCT-2 detachment, "the diving supervisor is the key to the safe, successful accomplishment of the assigned diving mission. He's responsible for organizing all phases of the diving operation including equipment, personnel, briefing of divers, chamber preparation and emergency procedures."

Once the scientific party established

the ice camps, underwater installation of the hydrophone array began. The array, consisting of eight hydrophones, had to be installed in a straight line at a constant depth. Eight-inch diameter holes were drilled through the ice at specific intervals and sections of pipe were lowered through the ice for subsequent assembly by the dive team.

The divers entered the water through a refrozen lead—a navigable channel through the surrounding ice pack. Although the ice at the lead was only two feet thick, the surrounding pack ice varied in thickness from eight to twelve feet. However, in spite of the thickness and hazy, late afternoon sunlight, the divers' visibility ranged to about 75 feet.

After the hydrophone array assembly, each connection was rechecked by the team, the array was lowered to its operational depth, and sound projections from the Coast Guard icebreaker *Northwind* and helo-deployed underwater charges indicated that the system was in good working order.

With another job well done, UCT-2 members rejoined the *Northwind* for the return cruise to Nome. ↓

Head for the

BY JO2 BARB TEIN-GEDDES

At Pax River, checking in is different than it used to be. Thanks to PASS—the Navy's Pay/Personnel Administrative Support System—it's possible for a new arrival to check in within a few hours or less.

For the more than 3,000 military people at Naval Air Station, Patuxent River, Md., it's not only the check-in time that has changed—PASS also means their personnel and pay records are consolidated and easily accessible and transportation needs are handled in the same location. More than that, PASS means convenience, accuracy in records, and a fast response if they need help.

According to one who's assigned to the new center, "PASS saves wear and tear on the individual and there's no duplication of work on the service record. Besides, mistakes can be corrected immediately."

The Navy PASS concept to consolidate the personnel, pay and passenger transportation functions came into being about two years ago. Three pilot areas—Washington, D.C., Norfolk, Va., and San Diego, Calif.—proved that the one-stop service idea would work for the benefit of the individual military member. The pilot program also showed that PASS would result in more efficient personnel management and savings in the number of billets required.

So in September 1978, the Vice Chief of Naval Operations made the decision to implement PASS at all Navy shore activities. Pax River, with its two major commands and over 30 tenant commands, including three squadrons, is one of those places where PASS is active.

It didn't happen overnight, however. Consolidating the personnelmen, disbursing clerks, and the civilian disbursing employees into one organization from their half-dozen or so small Mil-



tary Personnel and Disbursing Offices located all over the 7,200-acre installation wasn't easy. And there was opposition to the idea of taking people out of individual commands where they either had been one of a kind or in charge as senior petty officers and thrusting them into a large organization.

Jean Yannayon, civilian supervisor of the Educational Services Branch, was one of those initially opposed to PASS. "It was new and there were no set guidelines or procedures," she said. "I wasn't sure it would work."

But Lieutenant (junior grade) Janet E. Craig, the officer-in-charge of the new Personnel Support Detachment (or PSD as the PASS office is called), was determined to set up the model and make it work.

"It was a hard sell campaign, with a

lot of legwork and door-to-door contact," she said. "Commanding officers were no longer reliant on the individual who happened to be assigned to their commands but had people at their disposal with experience and expertise to serve every command. Now our major emphasis is on routine support; the decision-making is left to the CO."

There was the logistics problem—where would PASS find office space? The ground floor of the station's administration building (Bldg. 409) was available but not suitable as it was. Even so, the system began to shift into high gear as PNs were moved to Pax River's building 106, some two miles away from the admin center. Extensive renovation of the administration building began.

Eight weeks later, the PASS people

PASS



(39 military and 19 civilians), along with tons of equipment, more than 3,000 service records, and hundreds of other files, settled into their new quarters.

When you arrive now at Pax River, you'll head straight for building 409 in order to check in. Once assigned, your first point of contact in PASS is the Customer Service Branch. Here, you can replace your ID card or get new IDs for your dependents. If you're entitled to a housing allowance or commuted rations, or, if you need emergency leave, Customer Services can handle it. In fact, all the paperwork your service record may require during your tour at Pax River can be handled in Customer Services.

In Personnel Accounting, personnel diaries are maintained and your latest evaluations are screened and mailed to the Naval Military Personnel Command. This section, part of the Personnel Services Branch, maintains the military locator index and takes care of officer distribution control, monthly onboard status reports, and optical character recognition (OCR) quality control.

PASS people on the job: (left) DKCS Papel and DK1 Rowe and (below) LTJG J. Craig, officer in charge.



Whether you're planning to reenlist or to return to civilian life, the Reenlistments and Separations section will help you. All the paperwork generated by staying in or getting out starts here. This section also handles reenlistment bonuses, Fleet Reserve transfers, and retirements.

When you check out at Pax River, you'll see someone in the Transfer Section. If you're going to an overseas duty assignment, this section will arrange for passports, port calls, and travel.

The Educational Services Branch is also part of PASS. Anything connected with education—on or off duty, military or civilian institutions—is processed here by people who are also experienced in Veterans Administration requirements and forms, as well as forms for officer programs. Getting into a service school starts here. Examination results, good conduct awards, and change of rate requests are processed in this branch.

Monitoring pay records for over 3,000 military people keeps DKs in the Military Payroll Branch busy. But as Senior Chief Disbursing Clerk Nestor I. Papel said, "The workload for disbursing hasn't changed that much because we handled the same number of pay records before PASS as we do now. However, disbursing is now a centralized pay office for whole commands—PASS has made it easier for us to get things done. We don't give anyone the runaround about pay. We take care of any problems right here."

The Public Voucher Branch processes reimbursement travel vouchers for military and civilian personnel. The Fiscal Branch collects and disburses money, handles payroll, travel and per diem checks and prepares financial returns.

Right now, the workload continues to be extremely heavy. But this situation should be greatly alleviated when PASS at Pax River becomes completely automated.

Computers will be added to eliminate much of the paperwork overload. This PSD (and all other shore centers), will have a computer terminal link to

Head for the Pass

the Naval Military Personnel Command in Washington, D.C., and to the Navy Finance Center in Cleveland, Ohio. Instead of sending additions and corrections to service records by message, automation will permit those changes to be done right at local PASS offices.

Although Pax River's PSD handles the paperwork for travel claims, with the addition of a ticketing machine and full-service terminal facilities, all travel arrangements will be taken care of locally.

These upcoming changes should create improved working conditions for the PSD staff and that in turn means even better service for customers.

While most of the military enlisteds are "A" school graduates, the eight to 10 weeks of schooling doesn't always fully prepare them for the level of expertise the job requires. Newly reporting PNs at PASS usually spend their first six months in Customer Service where a senior petty officer shows them the ropes. They get additional training through the command training program plus on-the-job experience. During their tour, they move from branch to branch, becoming proficient in every area.

Senior Chief Papel, the command's leading chief, said, "Everything's working out fine. It's a good place for us and it's very convenient for our customers. We don't have to shuffle back and forth to get records or forms because everything we need is right here."

Other military and civilian employees agree. William Lankford, an ex-Navyman, now Personnel Officer, understands the language of the Navy and how the PASS concept works. "I think it's great and I think the Navy has come a long way."

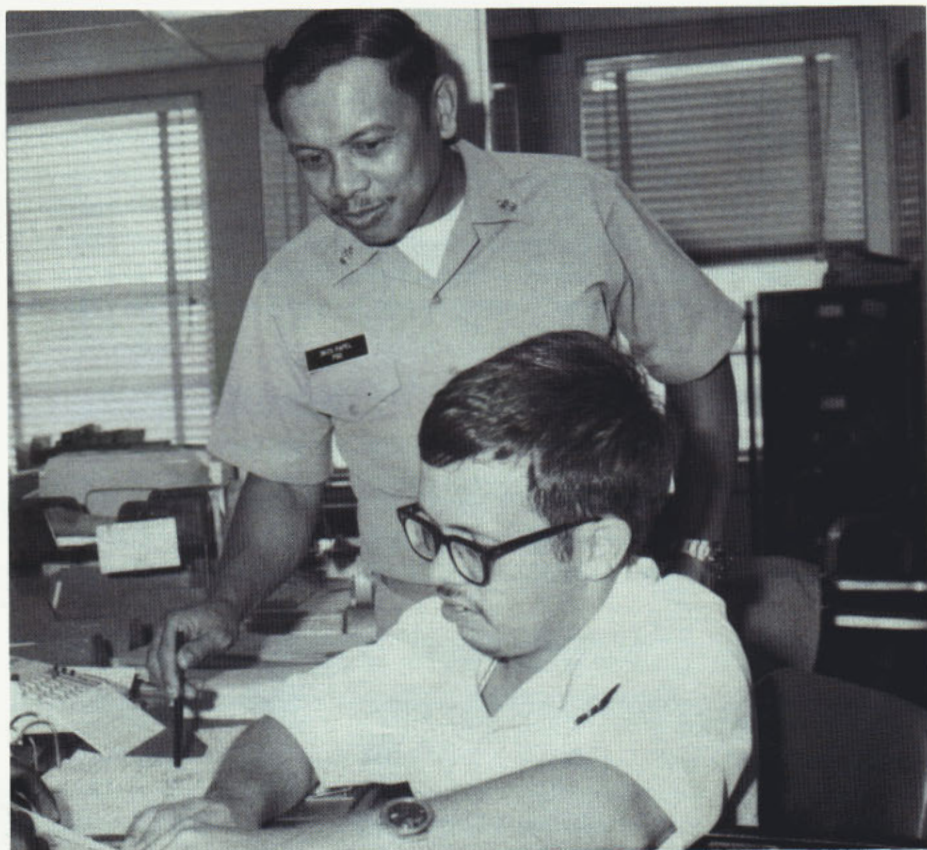
Even Jean Yannayon, who first opposed the move, has changed her mind. "There's so much more continuity now," she said. "We give good service to our customers and everyone has the same chance to learn and advance."

And what about these customers—the military people for whom PASS was designed? Judging from results of a survey, customers are overwhelmingly in favor of the PASS center. Negative comments are almost nonexistent; criticism tends to be constructive. Generally, comments are encouraging and give the staff a needed morale booster.

Working with problems day after day can sometimes be discouraging—especially when the day-to-day workload hardly guarantees the staff an eight-hour day. However, in an office where military personnel and civilian employees work together with good leadership and support, the job is worthwhile and rewarding. Despite long hours and constant interruptions, the system works where it counts—with customers. ↓



DK2 Borrero (above) takes care of the payroll while DKCS Papel and DK3 McLaughlin (right) go over leave and earnings statements.



(Photos by PH2 Karol Chordas and PH3 Tom Jones.)

Fortress Gale

Naval Power in the Pacific

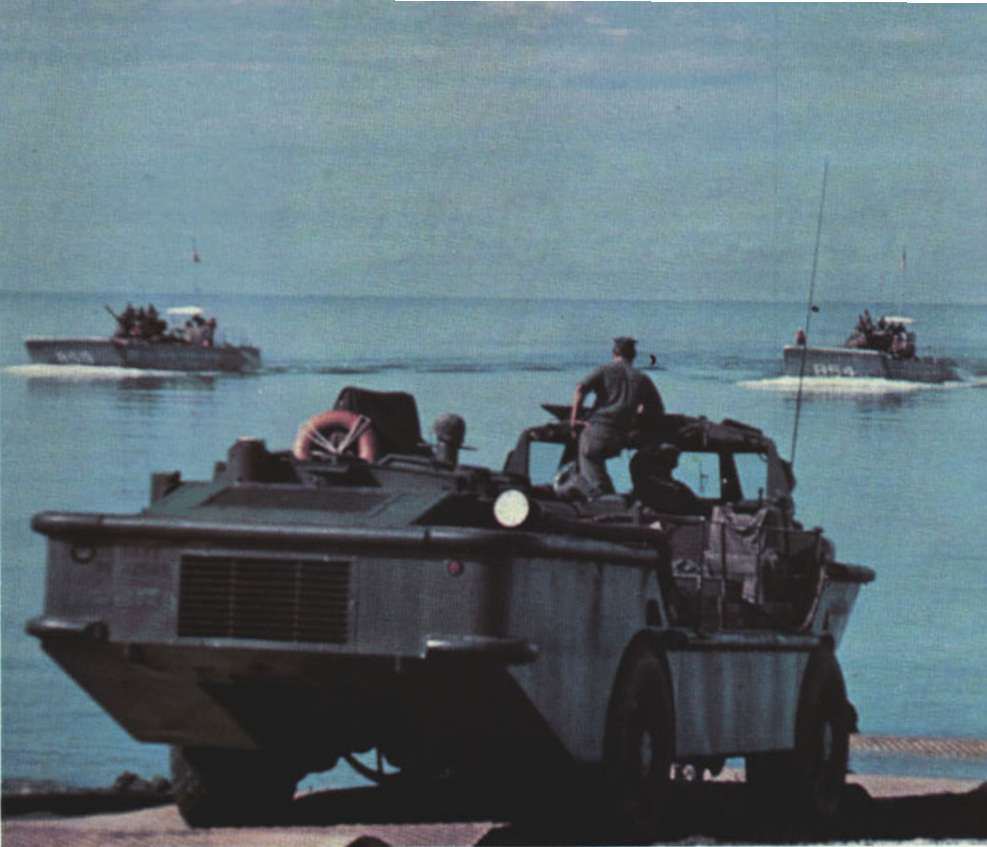


Fortress Gale

STORY BY PHC KEN GEORGE
PHOTOS BY PH2 R. WEISSLEDER
AND PHC GEORGE

As it turned out, "Fortress Gale" proved to be an appropriate name for the 7th Fleet's latest amphibious exercise. As 40,000 sailors and Marines, 26 ships and 280 combat aircraft massed for a mock invasion of Okinawa, Typhoon Judy sent mountainous seas and 150-knot winds smashing across the Western Pacific on a wild rampage.

In spite of a 24-hour delay caused by the storm, the more than 10 months of



Above: A marine AV-8 Harrier aircraft takes off to provide close air support for Marine elements on the beach. Top, right: Navy landing and reconnaissance craft (LARC) lands on Kin Blue Beach. Right: A Tarawa signalman, aboard a landing craft, communicates with USS Fort Fisher (LSD 40).



planning and numerous pre-attack rehearsals off Hawaii and the Philippines paid off in a demonstration of America's naval power in the Pacific.

During the war-at-sea phase of this large-scale, two-week operation, the amphibious task force—composed of Navy ships from all over the Pacific—encountered and thwarted attacks by “enemy” aircraft, submarines and surface raiders.

Then came the assault on Okinawa. Under cover of darkness, the first elements of the landing force, an underwater demolition team, slipped ashore and placed simulated charges at strategic points along the enemy held beach.

Offshore, thousands of Navymen and Marines waited anxiously to board

helicopters and assault boats to begin the attack at dawn. When the order came, the silence was broken by the roar of engines from inside the flooded well decks of the mother ships. Loaded with troops, tanks and heavy equipment, landing craft headed for White Beach. Second and third waves soon followed.

As the assault troops stormed ashore, Marine jet aircraft and helicopters provided close air support. Almost simultaneously, a fleet of 30 Marine helicopters from the Navy's amphibious assault ship USS *Tarawa* (LHA 1) descended on a simulated enemy airfield—actually the Futenma Marine Corps Air Station.

During the following days, amphibious operations were conducted at Kin

Blue Beach and Aha Cove, while separate helicopter assaults were made near IBA-Dake Mountain and the Ginoza Reservoir. Numerous logistical exercises supported the troop advances.

According to Rear Admiral Donald S. Jones, Commander, Amphibious Force 7th Fleet, the 14-day training exercise encompassed nearly every command in the fleet.

Below: A Marine CH-53 Sea Stallion helicopter landing aboard USS Tripoli (LPH 10).



Fortress Gale

"This is the first time an amphibious landing exercise has been so widespread," he said. "To support the exercise, reserve medical officers came from all over the United States (for active duty training). Nearly 500 casualties were simulated during the evolution."

Extraordinary safety precautions were taken; still, Fortress Gale did not lack for realism. ADM Jones said that the success of the training exercise proved that 7th Fleet's readiness remains at the highest possible level.

"We must practice so we will be ready when called upon," said the admiral.

"We'll be analyzing the value of Fortress Gale for months to fully understand everything that has taken place. But one thing is for certain: Navy and Marine Corps cooperation was outstanding. We are a great big family, dependent on one another." ↓



Top: Landing craft heads for the beach during Fortress Gale. Middle: Heavy equipment arrives on the beach. Right: Following landing, Marines moved inland and set up defenses.



750 Presentations Later

BY LCDR PHILLIP KAZANJIAN

While records show that Chief Warrant Officer (CWO) Ralph Furman Bishop Moore retired from the Navy Feb. 5, 1972, the level of his Navy activity today would make some people think he is still on active duty. Since CWO Moore joined the Chief of Naval Operations (CNO) Sea Power Presentation Team in 1971, he has been averaging two speeches a week before both military and civilian audiences.

The CNO Sea Power Presentation Program currently numbers more than 900 speakers nationwide, giving nearly 11,000 presentations annually. Moore has been the top speaker in the program since 1973.

This past spring, Moore became the first recipient of the Navy's "Full Salvo" Award presented by Admiral Thomas B. Hayward, honoring the warrant officer's 750th presentation for sea power.

At a time in life when some Navy retirees relax and take it easy, Ralph Moore is working harder than ever for the Navy. He does so at no cost to the government, not even receiving expenses for travel to or from speaking engagements. Asked why he continues doing this he said, "It's because I enjoy doing something for the country that has been so good to me. The Navy has also been very good to me; it gave me the best wife in the world. We both were in the Navy when we first met."

When Moore completed high school at the age of 17, he enlisted and went on a cruise that lasted nearly four years. When the hitch was completed, he decided to go to college. However, his college plans did not materialize since he was recalled to active duty just before Pearl Harbor.

One of his first duties during World War II was also his most interesting. He was sent to North Africa as the Navy liaison officer to the French Foreign Legion.

Next, he was commanding officer of the USS *Ensenada* (AG 23) operating off Guadalcanal. It was there he met

his wife to be, Julie, a Navy nurse serving on the island.

Ralph Moore joined the Naval Reserve in 1946. Recalled again in 1950, during the Korean conflict, he stayed on. He served on various ships and shore stations until retirement.

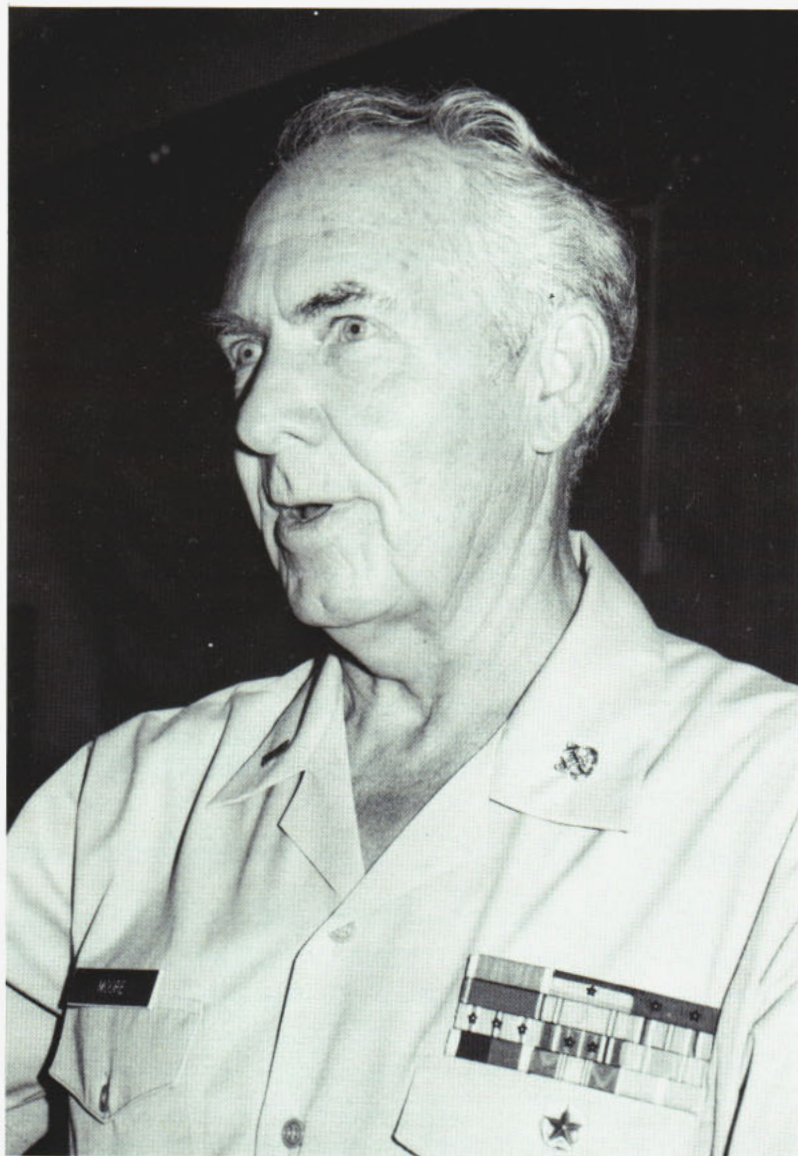
Residing in Westminister, Calif., a Los Angeles suburb, the Moores have three sons and two daughters. All three sons served in the Navy during the Vietnam War.

Moore originally became involved in the speaking program because of his concern over the Soviet naval buildup which he witnessed during his career. He has a desire to inform people about

that buildup. His most popular presentation—"Challenge at Sea"—addresses the magnitude and extent of the Russian Fleet. Moore said, "it is far beyond their need for legitimate self-defense."

He has the goal of making 1,000 presentations before he "retires" from active speaking. Judging from his popularity, this retirement, like the one in '72, may be subject to modification.

Information regarding participation in the Sea Power program can be obtained by contacting—Chief of Naval Operations (OP-09D), Sea Power Presentation Team, Rm. 718, 808 N. Randolph St., Arlington, Va. 22203. ↓



for the Navy Buff

BY JO1 DAN WHEELER

Here again, especially for those incurably hooked on nautical trivia, is another installment of *For the Navy Buff*.

Q. Is Master Chief Air Controlman Robert K. "Nap" Jones the only enlisted pilot still on active duty?

A. In the Navy, yes; in the armed services, no. AACM(AP) Jones, who has more than 30 years' active service, shares that distinction with the Coast Guard's Master Chief Aviation Machinist Mate John P. Greathouse. ADC-MAP Greathouse assigned to the USCG Aviation Training Center in Mobile, Ala., has served more than 37 years on active duty.

Q. Can you tell me something about the man for whom USS *Capodanno* (FF-1093) is named?

A. Reverend Vincent R. Capodanno, M.M., was a native of Elm Park on Staten Island, N.Y. A Maryknoll missionary ordained in 1958, Father Capodanno spent several years as a priest in Formosa before volunteering for duty as a Navy chaplain in Vietnam.

After completing a 13-month tour, Father Capodanno requested, and was granted, a six-month extension. During the fourth month of the extension, on Sept. 4, 1967, the 38-year-old chaplain, after being wounded by an exploding round, continued his duties until he was killed in a hail of machine gun fire. At the time of his death, he had just finished administering the Last Rites of the Catholic Church to a mortally wounded Marine.

Posthumously awarded the Medal of Honor, Father Capodanno was the only priest to be so honored during the Vietnam War, and the second Catholic priest in the Navy to receive the nation's highest award for valor. (The other was Father Joseph O'Callahan, S.J., who rallied USS *Franklin* crew members during an attack in World War II.)

Q. What were the original names of the eight vessels purchased in 1775-76 to form the nucleus of the Continental Navy?

A. In late 1775, the Continental Congress organized the first American fleet by granting commissions to Esek Hopkins, commander in chief of the fleet; Dudley Saltonstall, captain of *Alfred* (originally named *Black Prince*); Abraham Whipple, captain of *Columbus* (originally *Sally*); Nicholas Biddle, captain of *Andrew Doria* (originally *Defiance*); and John B. Hopkins, captain of *Cabot* (originally *Sally*).

By the end of January, 1776, the Naval Committee had added four smaller vessels to the fleet; *Providence* (originally *Katy*), *Hornet* (originally *Falcon*), *Wasp* (originally *Scorpion*), and *Fly* (originally *Lizard*).

In addition to these eight which set sail as a fleet in 1776, three more merchantmen were purchased and converted, but not ready to sail with the nucleus fleet. They were: *Lexington* (originally *Wild Duck*), *Independence* (original name unknown), and *Reprisal* (originally *Molly*).

Total cost of purchasing and outfitting the first eight Continental Navy vessels was \$134,333. We'll leave it to modern economists to determine if the Naval Committee got a bargain after inflation and such has been taken into account.

Continental Navy's Alfred



Q. When was John Paul Jones commissioned in the Continental Navy?

A. All of our young Navy's first officers were appointed and commissioned by the Navy Committee of Congress. John Paul Jones was commissioned First Lieutenant in the

Continental Navy and formally assigned to *Alfred* on Dec. 7, 1775.

Jones later claimed he had been offered the rank of captain and the command of the sloop *Providence*, but had declined for two reasons: he had never sailed a sloop which was regarded as dangerous and difficult to handle; and he believed he could be more immediately useful and learn more seamanship as first lieutenant under a captain.

Historians now believe that Jones regretted not accepting command of *Providence* (John Hazard initially took that command). Jones did ultimately take charge of *Providence* on May 10, 1776, his first command in the Continental Navy. He was 18th in seniority on the captain's list October 10, 1776—a position he found hard to accept gracefully.

Q. Wasn't Commodore Matthew C. Perry the first American naval officer to successfully negotiate any type of agreement with the Japanese?

A. When Perry opened Japan's ports to world trade in 1853, he certainly achieved deserved recognition for negotiating a treaty with the Japanese, but, he was not the first to negotiate successfully.

That distinction is reserved for Commander James Glynn, commanding officer of the sloop *Preble*. Learning from the Dutch consul at Canton, China, that 15 American seamen were being held captive in Nagasaki, Japan, CDR Glynn set sail in March 1849 on a mission of rescue.

Arriving on April 17, he ignored Japanese boats attempt-

Matthew Perry



ing to prevent his entrance into the closed harbor, and sailed to anchorage next to the mainland. Refusing to negotiate with none but the highest ranking Japanese military men and officials, he secured the release of the sailors on April 26 and headed home. Encouraged by these successful negotiations, Glynn drafted a proposal calling for a major effort by the United States to secure a trade agreement with Japan. Commodore Perry's mission a few years later was in response to Glynn's suggestion.

Q. In "old Navy" jargon, what were "millers"?

A. A well prepared "miller" might not be so hard to swallow, if you first understand the state of Navy food service in an 18th century man-of-war.

The main meal of the day often consisted of salt pork and beef, biscuits, some type of hearty vegetable, beer and some



butter and cheese. Late in a voyage, that fare, though still the same in name, was much different in quality. The meat became so hard that some sailors carved it into little boxes and varnished them; the cheese was infested with long red worms; biscuits were crawling with maggots—and these were just the first signs of decay.

Still later, the meat was inedible even after a good chew, the cheese was rancid and the biscuits had turned to dust. It was then that the millers began to look appetizing.

"At this point," according to A.B.C. Whipple in *Fighting Sail*, "the men would eat the ship's rats—if they could catch them. The rats were wryly known as 'millers' because of the white coats the animals got from spending much of their time in the flour."

Q. What was the first Navy ship to have a ship's library?

A. The first United States ship to have a library was probably the 74-gun *Franklin*. Just before she sailed for a three-year cruise in the Pacific in 1821, a New York philanthropist, William Wood, addressed the crew on the subject of a seaman's library. His remarks were greeted with such enthusiasm that the officers and men immediately contributed about \$600 to buy more than 1,000 books. Commodore Charles Stewart, *Franklin's* commanding officer, set aside a compartment aboard ship to serve as ship's

For the Navy Buff

library and he then appointed a librarian.

When the ship returned in 1824, what was left of the collection was turned over to the Brooklyn Navy Yard to become the nucleus of the Seaman's Library. Four years later, the Navy Department published a list of books which "will be furnished for the use of vessels of war when on a cruise, and for use of yards." Thus, ships' libraries came into existence and have continued to this day.

Q. In all history, which was the first country to have a standing navy?

A. According to Thucydides in his *History of the Peloponnesian Wars*, written about 404 B.C.: "Minos (of Crete) is the first to whom tradition ascribes the possession of a navy." (This statement by Thucydides on the navy of Minos concerns the Greek tradition. There may have been standing navies prior to the time of Minos in Egypt, Mesopotamia, India, or China.) Thucydides is also credited with having said: "A collision at sea can ruin your entire day."

Q. Which admiral recommended that planes be shot down in a "friendly fashion"?

A. You may be referring to a message sent by Fleet Admiral William F. Halsey to the 3rd Fleet after he received word of the Japanese surrender on Aug. 15, 1945. FADM Halsey's message said: "Cease firing, but if any enemy planes appear, shoot them down in a friendly fashion."

Fleet Admiral Halsey



Q. Why is the Medal of Honor worn on a ribbon around the neck instead of on the left breast as other medals are worn?

A. Medals and decorations are, for the most part, worn on the left breast. This custom may be traced from the time of the Crusaders who made it a practice to wear the badge of honor of their order near their hearts to denote the high reverence in which it was held.

In the days of the Crusades, a man's left side was the shield side—for he carried the large shield on the left arm to protect both the badge of honor and his heart. The custom of giving precedence to the left side has been handed down to us from generation to generation.

The Medal of Honor, however, is an exception to this custom. Since about 1912, it has been worn on a ribbon around the neck, a position of greater prestige. This apparently follows the custom applied to the highest orders of knighthood which were worn in the same manner.

Q. Why did the Japanese choose a Sunday for their attack on Pearl Harbor?

A. After last minute peace negotiations between the United States and Japan had failed in 1941, Sunday was chosen as the day of attack because, in the words of Captain Mitsuo Fuchida who led the 183-plane carrier air force, "... our information indicated that the American fleet returned to Pearl Harbor on weekends after training periods at sea. Also because our attack was to be coordinated with our operations in Malaya, where air raids and landings were scheduled for dawn of that day."

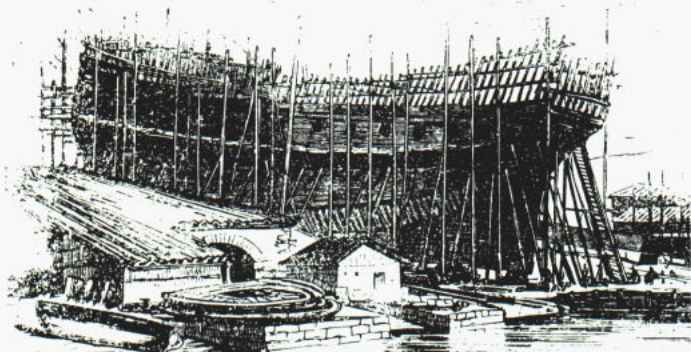
Q. Who said, "Say to the fleet, England expects that every man will do his duty"?

A. That was Admiral Horatio Nelson's immortal flag signal to his fleet immediately before the Battle of Trafalgar began on Oct. 21, 1805. Nelson's original order to his signalman called for the message: "Nelson confides that every man will do his duty." One officer politely suggested that "Nelson" be changed to "England" and the admiral agreed. Another suggested that "confides" be changed to "expects" because it would take fewer flags to signal, and Nelson again agreed.

During the battle against the combined French and Spanish fleets, Admiral Nelson was mortally wounded in the chest. His last words—reflecting no less of an expectation of himself than what he expected of his crew—were: "Thank God I have done my duty."

Q. How much wood was required to build the hull of a man-of-war?

A. H.M.S. *Victory*, (Nelson's flagship at Trafalgar), the British 102-gun man-of-war commissioned in 1778, measured 226 feet from figurehead to stern and had a beam of 51 feet. Typical of her era, *Victory* had a double-planked hull made of live oak and elm (for the keel). To fashion her ribs and double planking alone took about 2,500 trees—about 60 acres of prime forest.



Q. When was the first time "Anchors Aweigh" was played for an audience?

A. Rare is the American who has not been stirred by the strains of this popular march written by Marine Corps Lieutenant Charles Adams Zimmermann. When he composed the march in 1906, Zimmermann was the leader of the Naval Academy Band, a civilian contract organization which didn't become part of the Navy until 1910.

The march, dedicated to the graduating class of 1907, was first performed publicly at the Army-Navy football game in the fall of 1906. Apparently the stirring music had a salutary effect on the Navy's team because on that date they ended a long string of defeats at the hands of Army.

While at the Academy, Zimmermann became something of an institution (he served as leader of the Navy Band for more than 30 years) and was highly esteemed by the

students. In 1916, a monument was erected to his memory at his grave by "his Midshipmen friends."

Q. In October, we celebrated the Navy's 204th birthday, but wasn't there a period since 1775 when there wasn't any Navy?

A. At the close of the Revolutionary War, only three men-of-war remained in the Continental Navy. When these were disposed of between 1783 and 1785, the United States was left without a single naval vessel. However, the settlement of accounts and other naval matters was the responsibility of the Secretary of War after adoption of the Constitution.

In this state of defenselessness, our country's commerce suffered such losses at the hands of the Algerine pirates that Congress, in 1794, authorized the building of six frigates. Construction was begun on *Constitution*, *President*, *United States*, *Chesapeake*, *Congress* and *Constellation*.

After peace was made with Algiers in 1795, work was suspended on the ships. However, a new act passed in 1796 authorized the completion of three of the frigates. *United States*, launched on July 10, 1797, went to sea on July 13, 1798 under the command of Captain John Barry; *Constitution*, launched Oct. 21, 1797, went to sea on July 22, 1798, under the command of Captain Samuel Nicholson; and *Constellation*, launched on Sept. 7, 1797, went to sea on June 26, 1798, under command of Captain Thomas Truxton. The launching of these three ships marked the beginning of the U.S. Navy under the Constitution.

Q. From what poem does the following line come: "Who can feel the wild delight of the sailor homeward bound?"?

A. We believe the line comes from a traditional song of the sea which goes like this:

"The farmer's heart with joy is filled
When his crops are good and sound,
But who can feel the wild delight
Of the sailor homeward bound?"

"For three long years have passed away
Since we left freedom's shore,
Our long-felt wish has come at last,
And we're homeward bound once more."

Q. What is the derivation of the word "Antarctica"?

A. Let's start a little further north. The Arctic is so named because it is situated under the northern constellation called the Bear (in Latin, "Ursa") for which the old Greek name was "arktikos" or "arktos." Later, the Middle English changed it to "artik," and hence its present name. Antarctica is from the two words "anti-arktos" or "opposite the bear." ↓



Navy Rights & Benefits

Advancement System

Ask a person who's spent a Navy career successfully rising through the ranks about the secret of his success and you're likely to get an answer like this: "Know how the advancement system works."

After all, understanding the system is the first step toward making that system work for you. And the advancement system is one that the Navy particularly wants each member to understand.

This article, No. 13 in the series on Navy Rights and Benefits, highlights the entire enlisted advancement process and explains the behind-the-scenes operation of the advancement system. The information should help you in your quest to make the system work for you.

Preparing Yourself

If you are among the thousands who want to wear a rocker and stars above your crow, prepare now for advancement. This "journey of 1,000 miles"

begins with a single step into the educational services office for a copy of *The Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards* (NavPers 18068-D).

Study its contents. It contains a listing of the *minimum* skills required for advancement to each paygrade and is considered "must" reading. For your convenience, the *Occupational Standards* portion of the manual has been reprinted in a pamphlet for each rating. Copies are available through your command education office.

Next, get a copy of the latest edition of *The Bibliography for Advancement Study*, also from the educational services officer (ESO). It lists required and recommended rate training manuals (RTM) and other reference material used to write Navywide advancement exam questions. Courses marked by an asterisk (*) are mandatory.

Once you've studied required and recommended RTMs, complete the appropriate non-resident career courses

(NCRR) included in the manuals. A word of caution: don't study *only* the NRCC questions. Study the entire manual. Questions were written to guide students through the RTM material; however, the entire manual is testable.

Complete *Personnel Advancement Requirements* (PAR) as soon as possible. PAR factors, which replaced "Practical Factors," are based on current occupational standards for each rating and all E-4 through E-7 candidates are required to have them checked off by a division supervisor. PAR is divided into three sections: administrative requirement such as time in rate (TIR); formal school and training requirements such as mandatory "A" schools; and occupational and military ability requirements for which candidates demonstrate ability to perform tasks applicable to their rate and rating.

"Hitting the books" and completing check-off lists are not the only prerequisites for advancement. Performance on the job is extremely important—evaluations dictate if you will be recommended by your commanding officer for advancement. Additionally, superior performance evaluations add points to the final multiple and even one hundredth of a point can make a difference.

A few weeks before the exam, review your service record to make sure all performance evaluations, TIR, correspondence courses and awards have been accurately recorded. Check this information against exam worksheets prepared by the ESO to ensure that your beginning multiple (same as final multiple minus exam score—see section entitled "Figuring the Final Multiple") includes every point to which you are entitled.

Once all this is completed, you're ready to take the exam.

All Navywide advancement exams have 150 multiple choice questions, each with four answer choices. They are given on the same day worldwide for each paygrade to minimize the opportunity for compromise and give every candidate equal opportunity for

advancement. At each exam center, proctors explain exam procedures and answer "how to" questions about completing answer sheets.

There are no secrets to taking the three-hour exam except these: know your subject, get a good night's sleep beforehand, and come prepared to do your level best. Answers don't conform to any prearranged pattern, so don't be alarmed if answer #2, for instance, pops up four or five times in a row and then doesn't appear again for several columns of questions.

Also, don't look for "trick questions"—there aren't any. Read each question carefully and don't try to read more into an item than what is asked. Even if a question seems unusually

easy, don't fret—every exam has some freebies. Remember also there is only one correct answer for each question and it is *absolutely* correct, not "most correct" or "more correct." In practically all cases, however, alternative answer choices will be plausible enough to stump those with only superficial knowledge of their rating.

During each exam cycle, a few advancements are delayed because either examinees or their commands incorrectly complete exam paperwork. The most common mistake is improperly marked answer sheets. This alone can delay getting exam results back to examinees for up to six months.

Some common errors are:

- Not matching printed information

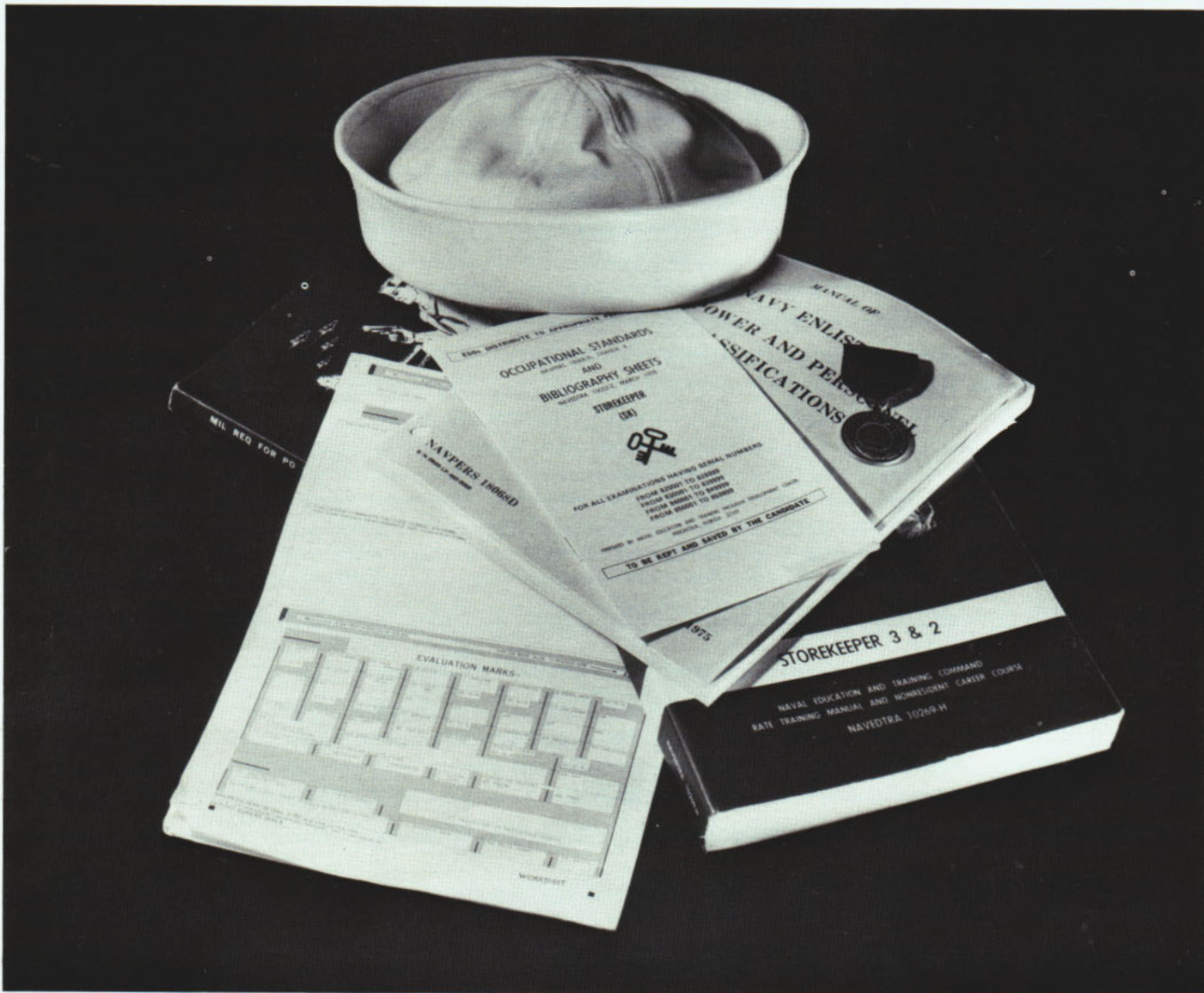
at the top of the exam with computer-scanned information at bottom indicated by darkened circles.

- Answer circles not completely blackened. This frequently happens because examinees use a light pencil which the scanner won't "read." It's advisable to use either an electrographic mark-sensing pencil or a number 1 or 2 pencil.

- Doodling in the computer time tracks on the left side of the answer sheet. Don't make *any* unnecessary marks anywhere on the answer sheet.

- Failure to include correct primary Navy Enlisted Classification (NEC).

- Incorrect time in rate (TIR). Frequently, the TIR indicated exceeds length of service.



Navy Rights & Benefits

❖ Incorrect unit identification code (UIC).

Some mistakes are "mechanical errors"; others are "discrepancies." Mechanical errors include not blackening in circles entirely. Discrepancies include listing an incorrect social security number. Either type of mistake can delay an individual's exam results.

Both slow the scoring system and cause headaches for Navy civilians and military at the exam center in Pensacola.

After Exams Are Mailed

Every Navywide advancement exam is mailed to the Naval Education and

Training Program Development Center (NETPDC) in Pensacola for scoring. As they arrive, they are logged in and placed in batches of 11 commands each. Each batch is immediately assigned a code number so it can be retrieved at any point in the scoring process. Batches go through an optical scanner which transfers information

Table 1. Specific Requirements for Advancement

Table 1. Specific Requirements for Advancement								
Requirements	E-1 to E-2	E-2 to E-3	E-3 to E-4	E-4 to E-5	E-5 to E-6	E-6 to E-7	E-7 to E-8	E-8 to E-9
Service	6 mos.	6 mos. as E-2.	9 mos. as E-3.	12 mos. as E-4.	36 mos. as E-5	36 mos. as E-6	36 mos. as E-7	36 mos. as E-8
School	RTC (CO may advance up to 10% of company)	none	Class "A" for PR3, DT3, IS3, AMS3, HM3, PH3, FTB3, MT3, MU3, EW3	Naval Justice School for LN2	none	Navy School for AGC, MUC, MMC	none	none
PAR NAVPERS 1414/4	none	none	PAR (Personnel Advancement Requirement), must be completed for advancement to E-4 through E-7				none	none
Performance Test	none	none	Specified ratings must complete applicable performance tests before taking Navywide advancement examination				none	none
Military Leadership Examination	none	none	Must be passed before advancement exam for E-4 and E-5 candidates		none	none	none	none
Enlisted Performance Evaluation	As used by CO when approving advancements		Counts toward performance factor credit in advancement final multiple for all E-4 through E-9 candidates					
Obligated Service Required	There is no set amount of obligated service required either to take the Navywide advancement examination or to accept advancement to paygrades E-1 through E-6					All CPO candidates must have two years, remaining obligated service to accept appointment to a CPO paygrade		
Examinations	Locally prepared tests	NETPDC exams or locally prepared test	Navywide advancement examinations required for advancement to all petty officer paygrades			Must take Navywide advancement exam and be selected by Navywide CPO or SCPO/MCPO Selection Board		
Non-resident career course and RTM	none	Required for E-3 and all petty officer advancements unless waived because of completion of Navy school. Courses need not be completed but once, i.e., those who complete the 3&2 course for PO3 need not complete same course again for advancement to PO2.					Non-resident career courses and recommended reading, see NAVEDTRA 10052	
CO recommendation	All Navy advancements require the commanding officer's recommendation for advancement							
Authorization for advancement	Commanding Officer		Naval Education and Training Program Development Center authorization required for advancement to E-4 through E-8 in addition to command approval					

on the exam sheets to magnetic tape. The tape is sent to the Navy Regional Data Center (NARDAC) at NAS Pensacola for scoring by computers. Answer sheets containing mechanical errors are rejected by the optical scanner and manually corrected before being reinserted and recorded on tape.

About 6,000 to 8,000 answer sheets out of 75,000 each exam cycle are rejected by the computer for errors which should have been caught either by the individual taking the exam or by the local exam center. Correcting errors on these delays the scoring process for all involved.

When magnetic tapes arrive at NARDAC, they are "read" by the Navy's exam scoring computer. Each exam is graded and assigned a Navy Standard Score. After the computer scores the exams, it adds the Navy Standard Score to each individual's beginning multiple and codifies them by rate and rating. Once this process is completed, OPNAV notifies the exam center to advance so many people in each rate and rating based on assigned quotas (which are based on the needs of the service).

Once the center has determined which people are to be advanced, rate change authorizations are mailed to commands. They contain pertinent information such as examinees' final multiple, exam scores, exam profiles, and date to be advanced. With CO approval, each candidate is advanced on the date specified by NETPDC. All

others get notices explaining where they were deficient.

Specific Requirements for Advancement

Tables 1 and 2 outline in detail the specific requirements for advancement at each paygrade, and the scheduling, scoring and notification process. Minimum Navy time in service (TIS) is no longer a requirement for advancement participation. In other words, if a person meets all other requirements, including time in rate (TIR), he or she can participate in the advancement exam, regardless of total time in service. However, the final multiple score, which includes a length of service factor in computing total points, will be determined in the same manner as in previous exam cycles (see Table 3).

Some Particulars About the Exam System

Step by step, the advancement process is outlined in training manuals. Detailed information is available from Navy career counselors. Qualifications for advancement in each rating are outlined in *The Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards*. Still, there are areas about which people ask questions—How is the final multiple calculated? How important is the CO's recommendation?—and these

will be addressed in this section so you will have a complete understanding of what is involved in getting advanced.

The CO's Recommendation

The most important requirement in the enlisted advancement system is the commanding officer's recommendation of individual candidates. Without it, no one can take the exam. With it, each candidate has been certified to be qualified for advancement. When a CO recommends a sailor, that means the person is qualified *in all respects*, to the best of the CO's knowledge, to assume the duties and responsibilities of the next higher paygrade.

COs are tasked by the Navy with making honest and conscientious performance evaluations and advancement recommendations. It is the CO's responsibility to recommend *only* those people who are fully qualified. Their initial selection for advancement determines the validity of the entire advancement process.

The Exam

Navywide advancement exams were not designed to test *must know* information. When an individual is recommended for advancement, the command is certifying that he or she already knows the *must know* information for the rate or rating. That leaves only the *should know* and *nice to know* information as testable material.

How do the three differ? Consider

Table 2. Scheduling, Scoring and Notification Process for Advancement Exams

PAYGRADE	EXAM GIVEN	EXAM SCORED	QUOTA DETERMINED	NOTIFICATION	SELECTION BOARD/ NOTIFICATION
E-4 - E-6	March September	April October	May November	June December	not applicable for E-4 through E-6 candidates
E-7	January	February	May	April (board eligible)	June/August
E-8 - E-9	November	December	February	January (board eligible)	March/June

Navy Rights & Benefits

an example from the machinist's mate rating.

- Every MM *must know* how to rethread a bolt.

- Every MM *should know* several methods of rethreading bolts.

- It would be *nice to know* how many methods there are of rethreading bolts.

So, *must know* information is that knowledge a petty officer must have to function effectively in his or her rate and rating. *Should know* information is that knowledge which places a petty officer a notch above those who have not applied themselves as diligently.

(*Should know* is the information tested on advancement exams.) *Nice to know* information is just that, and is not generally tested because most of it has no practical application.

Because it is assumed that each candidate for advancement knows the *must know* information, the exams cannot determine if a person is qualified or not. They do, however, determine who is *most qualified* on the basis of *should know* information and ranks them in order from the most qualified to the least qualified. Since the enlisted advancement system is vacancy driven (not everyone can be

advanced because the number of vacancies is fewer than the number of qualified candidates), this process singles out the most qualified for advancement.

It gets tougher to advance the higher one goes because of keener competition for fewer vacancies and lower quotas in the higher paygrades.

Navy Standard Scores

No one scores 150 on a Navywide exam; the highest score is 80. (Only one out of 400 scores that high.) This is because raw scores, which are the number correct out of the total asked, are converted to Navy Standard Scores ranging from 20, a failing score, to 80, the highest score.

Navy Standard Scores are representative of statistical percentiles. They are computed on the basis of the mean and standard deviation found in each group of exam takers. Generally, a standard score of 80 is in the 99th percentile; a 50 in the 50th percentile; and a 35 in the 6th percentile. All raw scores have to be converted to standard scores so that comparisons within a given group can be made. For example, if in a very tough rate and rating, a raw score of 102 was the highest, it may seem quite low when you consider that there were 150 questions asked. But, if it is 15 points higher than the next best score, it's a very good score. A Navy Standard Score of 79 or 80 makes the raw score of 102 immediately recognizable as excellent.

The Final Multiple

The Chief of Naval Operations determines how many candidates in each rate from E-4 through E-9 will be advanced. It's based on manning requirements and projected losses due to retirements, discharges, advancements, deaths, etc. CNO tells the exam center the quotas for each paygrade in each rating.

The final multiple for advancement to E-4 through E-6 consists of points awarded for the exam score, performance marks, length of service, time in rate, awards, and passed not advanced (PNA) points. Table 3, Figuring the

Table 3. Figuring the Final Multiple

	E-4&5		E-6		E-7		E-8		E-9	
	Max Score	FM Wt.	Max Score	FM Wt.	Max Score	FM Wt.	Max Score	FM Wt.	Max Score	FM Wt.
Standard Score	80	35%	80	30%	80	60%	80	50%	80	40%
Performance Factor	70	30%	92	35%	52	40%	80	50%	120	60%
Length of Service (E4/5 = LOS-TIR + 15) (E6 = LOS-TIR + 19)	30	13%	34	13%	n/a*		n/a*		n/a*	
Time in Rate (E4/5 = TIR x 2 + 15) (E6 = TIR x 2 + 19)	30	13%	34	13%	n/a*		n/a*		n/a*	
Awards	10	4.5%	12	4.5%	n/a*		n/a*		n/a*	
Passed not advanced (PNA points)	10	4.5%	12	4.5%	n/a*		n/a*		n/a*	
Total	230	100%	264	100%	132	100%	160	100%	200	100%

*Though these items do not figure into calculating the final multiple for E-7 through E-9, they are considered by the selection board as directed by the Chief of Naval Personnel

- **Standard score**—The exam score weighs heavily in the final multiple for each paygrade. If you fail the exam, you will not be advanced. There are standards which must be met even on a discriminating exam. A person must have at least a recognizable minimum of *should know* knowledge.

- **Performance factor**—These points are awarded for performance evaluations over a given period which varies from paygrade to paygrade.

- **Length of service**—Points for length of service are determined by subtracting the number of years served in the current paygrade from the number of years served on active duty; add 15 to that figure for E-4 and E-5, 19 for E-6.

- **Time in rate**—Points for time in rate are computed by multiplying the number of years served in the current paygrade by two and then adding 15 for E-4 and E-5, 19 for E-6.

- **Awards**—Some medals and awards are worth final multiple points. The *Manual for*

Advancement (BUPERS INST 1430.16) contains a list of medals and awards and the number of points assigned to each. The maximum number of points possible is 10 for E-4 and E-5, 12 for E-6.

- **PNA points** are determined by NETPDC and assigned to those who have previously passed an exam in their paygrade but have not been advanced. Navy officials have long felt that recognition was due those who scored well on advancement exams but were not advanced. So, in 1972, the PNA point system was developed. It was a compromise between requiring all candidates to start from scratch with each exam cycle, and not requiring them to retake the advancement exam. To qualify for PNA points a candidate must have achieved a relatively high score on previous exams and received high performance marks. Points are automatically awarded by NETPDC and range from .5 to 3 points per exam to a maximum of 10 for E-4/E-5 and 12 for E-6.

Final Multiple, depicts final multiple computations for E-4 through E-9.

For advancement to E-7 through E-9, the final multiple determines who will be "selection board eligible." Those who have been so designated will have their service records reviewed by the appropriate board which convenes annually. Requirements sought by selection boards vary from year to year, but usually they look for leadership capability and experience, off-duty education, time at sea, and support of the Navy's equal opportunity goals.

One Final Look

Every Navy person seeking advance-

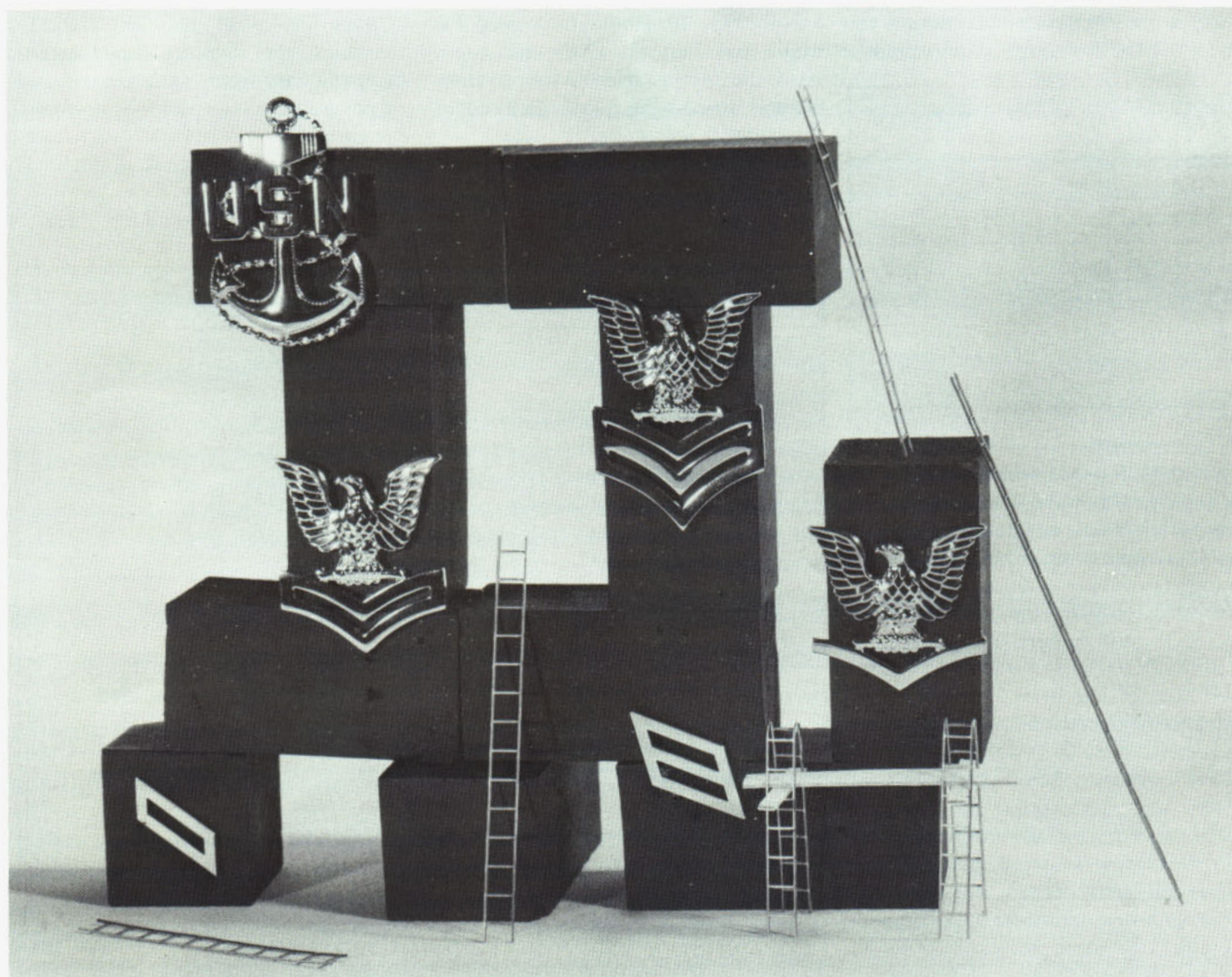
ment must demonstrate leadership ability, possess sufficient military and professional knowledge, and be recommended by the commanding officer. In general—and in summation—each candidate must:

- Have the required time-in-rate.
- Demonstrate an understanding of the information in mandatory rate training manuals and non-resident career courses.
- Demonstrate the ability to perform tasks listed in the Personnel Advancement Requirements (PAR), NavPers-1414/4.
- Be certified by the commanding officer to be eligible in all respects for advancement.
- PO3 and PO2 candidates must

pass a locally administered military leadership examination.

• Demonstrate knowledge of the technical aspects of the next rate by passing a Navywide advancement exam. (E-8 and E-9 candidates who qualify as "selection board eligible" shall retain such eligibility for three consecutive years.)

Meeting all these requirements cannot guarantee that any one person will be advanced. However, the advancement system *does* guarantee that all persons within a particular rate will compete equally for the vacancies that exist.



Regular or Early- Which Candidate Are You?

All candidates must meet the time-in-rate (TIR) eligibility requirements in order to participate on a Navywide examination for advancement in rate. However, under the new Early Advancement System, there are two types of candidates—Regular and Early. Regular candidates are those test passers who meet Department of Defense (DOD) Total Active Federal Military Service (TAFMS) requirements (shown below). Early candidates are test passers who do not yet meet the DOD TAFMS requirements.

DOD TAFMS REQUIREMENTS:			
E-2 6 mos	E-3 1 yr	E-4 2 yrs	E-5 3 yrs
E-6 7 yrs	E-7 11 yrs	E-8 16 yrs	E-9 19 yrs

Determination of who will be advanced to E-4/5/6 will depend on an individual's relative standing among his rating peers as measured by his final multiple score (FMS). Just as the numbers of early candidates who may be selected for advancement to E-7/8/9 must be controlled to remain within DOD imposed TAFMS constraints, the number of early E-4/5/6 advancements must be controlled. This is accomplished by establishment of an Early Eligibility Zone. An early candidate who ranks within this zone may be advanced if the advancement quota for his rating is large enough. The Early Eligibility Zone's size (percentage) shall be established by a complex computer iteration process in order to maximize the numbers of early can-

didates who may be considered for advancement.

As an example of how the selection process works, consider the following: Suppose that eleven candidates are competing for advancement to first class petty officer in the XYZ rating, and that due to vacancies seven advancements may be authorized. A listing of candidates, in order by Final Multiple Score (FMS), might look like the listing in Table 4.

Note that 10 candidates passed the exam and had an FMS calculated. Also, the number selected for advancement is seven—the quota required to fill available vacancies.

For Early candidates ('E') to have been selected for advancement, they had to achieve a FMS of 195.16 or

higher. Two early candidates did not achieve this score and thus may not be advanced regardless of the quota due to DOD TAFMS constraints. In this example, the Early Eligibility Zone was set at 40% of the test passers and candidates 2 and 3 had a FMS high enough to qualify them for selection. Regular candidates have a slightly increased opportunity for advancement since a FMS of 183.03 or above will qualify them for selection.

Navy personnel planners indicate that the Early Eligibility Zone (percentage) will vary from exam to exam and by paygrade. At E-4 and E-5, normally the early zone cut off FMS and selection FMS will be very close, if not identical, i.e., 100% early zone. For E-6, the example above should be typical.

Table 4. Cutoff Score Determination

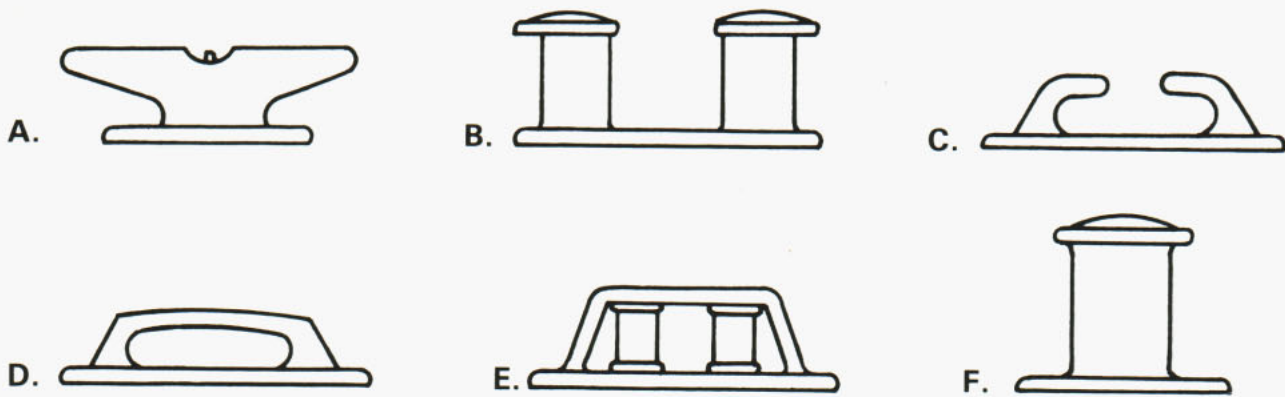
	Candidate	FMS	Status
	1	207.65	Selectee
	2	E201.65	Selectee
	3	E197.18	Selectee
	4	195.16	Selectee
Early Eligibility Zone Cut Off Score			
	5	193.16	Selectee
	6	190.61	Selectee
	7	E188.30	PNA *
	8	183.03	Selectee
Selection Cut Off Score			
	9	182.15	PNA
	10	E179.32	PNA
	11	— — —	Fail
*PNA—Passed Not Advanced			

Stern Shots

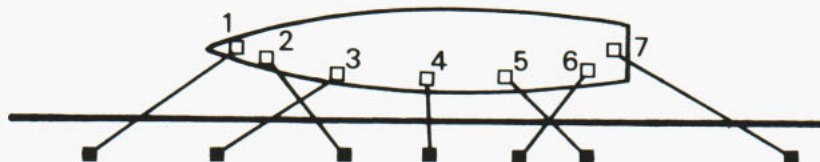
Whenever a ship comes into port, liberty for the crew doesn't begin until the vessel is securely tied up. For large ships, this evolution may take several hours.

Identify these deck fittings and mooring lines to test your knowledge of seamanship. If you're a deck hand, it'll be easy. But, if you're among those sailors who always stand by waiting to "hit the beach," this test may not be so easy.

Deck Fittings:



Mooring Lines:



- | | |
|----|---------------------------|
| 1. | a. after quarter spring |
| 2. | b. waist breast |
| 3. | c. bow line |
| 4. | d. after bow spring |
| 5. | e. forward bow spring |
| 6. | f. stern line |
| 7. | g. forward quarter spring |

Deck Fittings: A-cleat; B-bitts; C-open chock; D-closed chock; E-roller chock; F-bollard. Answers: 1-c; 2-d; 3-e; 4-b; 5-a; 6-g; 7-f.

All Hands, the magazine of the U.S. Navy, published for the information and interest of all members of the Naval service, is issued monthly by the Office of the Chief of Information, Room 2E-329, Pentagon, Washington, D.C. 20350. Issuance of this publication is approved in accordance with Department of the Navy Publications and Printing Regulations P-35 (revised January 1974). Opinions expressed are not necessarily those of the Department of the Navy. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted.

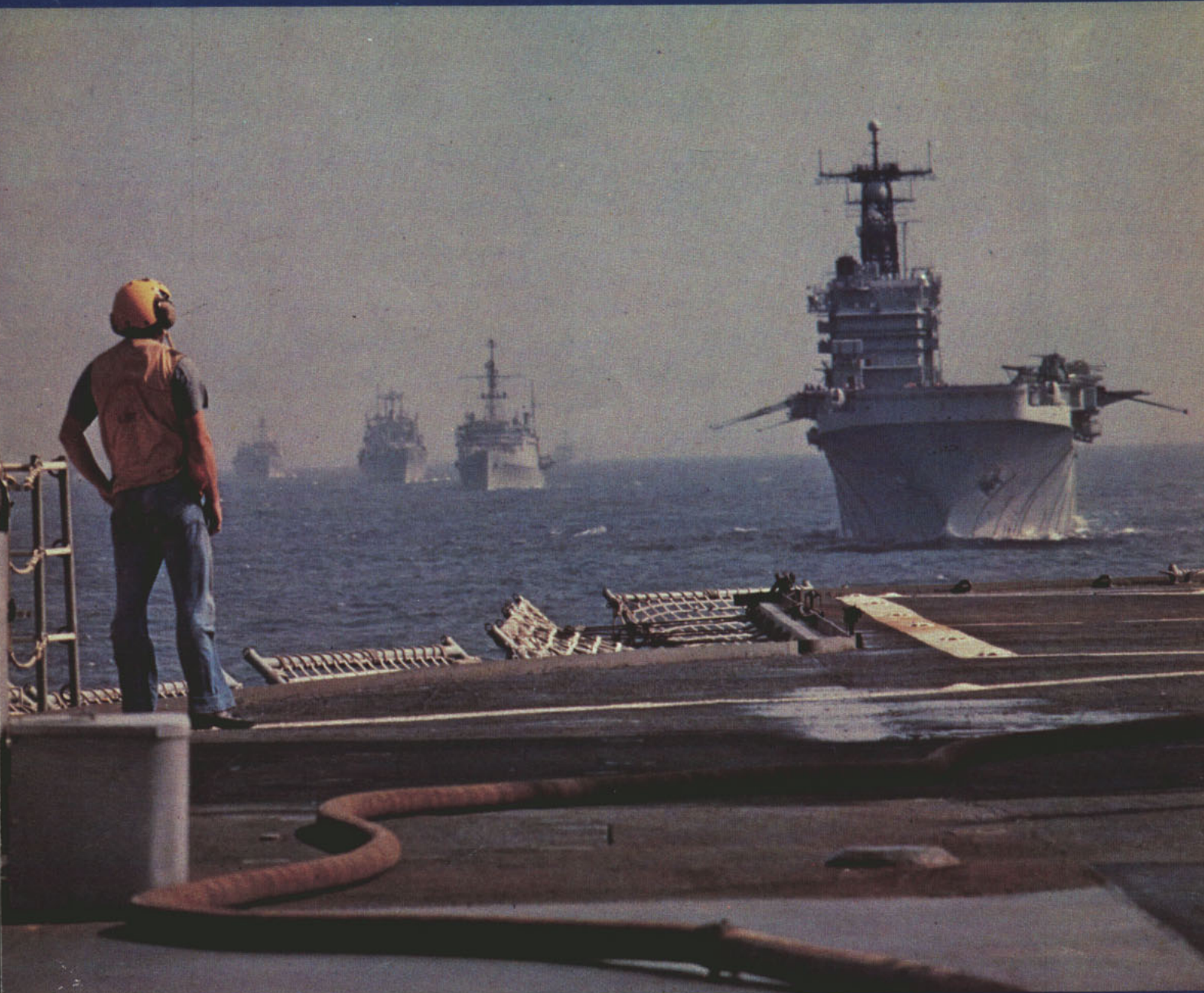
ORIGINAL ARTICLES and information of general interest may be forwarded addressed to the Editor, All Hands, Print Media Division, Navy Internal Relations Activity, Hoffman #2, 200 Stovall St.,

Alexandria, Va. 22332.

DISTRIBUTION. All Hands is distributed to all Navy activities on the Standard Navy Distribution List (SNDL) on the basis of one copy for approximately six naval officers and enlisted personnel on active duty. Limited distribution to Marine Corps activities is effected by the Commandant.

PERSONAL COPIES. The magazine is for sale by Superintendent of Documents, U.S. Government Printing Office, Wash, D.C. 20402. The rate for All Hands is \$1.50 per copy, subscription price is \$18.00 a year, domestic (including FPO and APO address for overseas mail), \$22.50 foreign. Remittances should be made payable to the Superintendent of Documents and forwarded directly to the Government Printing Office.

7th Fleet's 'Fortress Gale'



See Page 32